THE CULTIVATOR.

THIRD — To Improve the Soil and the Mind. — SERIES.

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Shelter for Farms.

The importance of shelter has been long and well understood by gardeners. Wall-protection has been in use from time immemorial. Every skilfull horticulturist is aware that tender plants will survive severe winters when surrounded or overshadowed by evergreen trees; and the same result has been observed on plants growing in common woods. The shelter of high picket fences, in parallel rows, enabled FREDERICK TUDOR of Nahant, to transform a bleak surface, where the ocean-tempest and spray prevented the growth of a single natural shrub or tree, into one of the most luxuriant gardens of the country.

But the importance of shelter on farms, and more especially for the protection of crops, has not been generally appreciated. Exposed surfaces, over which the cutting winds of winter sweep freely, are injuriously affected in many ways. The snow, which should form a protecting mantle, is swept off into drifts, and the bare earth subjected to the full action of the hardest frosts. Young plants of grass and winter grain, after being heaved up by this intense freezing, are beaten about and often actually torn out by the action of the strong wind upon them. This every observant farmer must have seen. But winter is not the only season of injury. Sweeping tempests beat down grain fields, level the heavy grass of meadows, and break and injure young half-grown fields of corn. Young and newly planted orchards are severely frozen, whipped about, destroyed, and dried up by the blasts which for several winter months sweep over them.

To avoid these evils, an experienced farmer of western New-York has made to us a valuable suggestion, well worthy of the careful and timely attention of every occupant of new land. He proposes that every farmer who is about to clear the land of its forests, should leave a strip or belt of woods, at least four rods wide, at distances asunder not exceeding eighty rods, and running in such a direction as to afford shelter from the prevailing winds. This should be kept fenced on both sides, so as to allow the thick growth of young trees, which will render the screen more perfect, and afford a constant succession as the older trees are removed for fuel. Every farmer needs a certain amount of reserved woodland; and it may be as well reserved in this advantageous shape, as in one that from its position shall be of no benefit to the land. On small farms, one single belt, of such a width as may afford the necessary wood for use, judiciously located to protect the farm, may be sufficient; on large ones they should be at regular intervals. In many cases, the borders of a gully or stream may be selected as the place for the woods, where the wet or broken land would be of comparatively little value. Farmers are sometimes greatly incommoded by their neighbors clearing away woodland, on which they had depended for protection; but no such inconvenience would be felt if they had made proper provisions on their own land.

Some of the trees thus left exposed, may be blown down by the winds, but the rest will soon become inured to the exposure, and the inconvenience from this source will not be great, so long as a portion is occasionally wanted for use.

A great advantage in having a portion of the original forests, above that of planting belts artificially, is the *great height* of the screen, the woods in many places being seventy to ninety feet high, and sometimes even more. Yet in frequent instances, where farms have been entirely denuded by the early settlers, belts of fast-growing trees may be planted, and will afford good protection after a lapse of a comparatively few years, and their timber may prove eminently valuable. There is perhaps no kind of tree that promises so much profit as the *locust*, even with the occasional danger of injury by the borer. They will often grow fifty feet high in twenty-five years, if planted closely. Less valuable for timber, but very rapid growers, are the chestnut, the common elm, the silver maple, the European larch, and the Norway fir; with some of these on rich lands, screens thirty feet high may be had in ten years. The silver poplar exceeds all in rapid growth, but its wood is worth but little.

An important advantage, to be *occasionally* derived from shelter, has not been mentioned in the preceding remarks. Farmers who are familiar with the different appearances of *rust* in wheat, are aware that although it often attacks the grain crop in patches with various degrees of severity, affecting most those portions which grow on low and mucky lands, yet at other times and in its most virulent form, it seems borne on the wind, and often destroys thousands of acres on

all kinds of soil in one sweeping blight, without the escape of a tenth part of the whole. Perhaps one of the most destructive instances of this sort occurred in northern Indiana in 1840. Early and late sown, upon every grade of soil, on hill or dale, woodland or prairie, all was affected. *In sheltered situations in woodland, it was least injured.* Another instance occurred many years ago in western New-York. We are informed by Isaac Hathaway, of Farmington, Ontario county, (who first suggested to us the plan of leaving belts of wood, in clearing,) that out of two hundred acres of promising wheat which he then had growing, all was completely destroyed *except those portions sheltered by woods*, the total loss being four or five thousand dollars—most of which he believes would have been saved had his land been protected in the manner we have described.

All the preceding remarks are intended to apply to those farms which are nearly level, or moderately rolling or hilly, and which have not an excessively broken surface. In some cases, lands may be situated in deep valleys or on the sheltered sides of high mountains, where of course this treatment cannot apply. On our western prairies, where the severe and constant winds are found to be a most serious evil in many respects, and a large drawback on successful farming, there is no question that these effects might be astonishingly softened by artificial timber belts, which a very few years on a fertile soil, would amply furnish. We have known an ordinary English thorn hedge, which was allowed to run up without shearing, some twenty feet or more in height, to shelter and save from winter-killing, a crop of wheat as far as its influence extended, while beyond this the grain was nearly destroyed; yet this narrow hedge, only a few feet in thickness, formed a very imperfect screen when compared to a mass of trees several rods in breadth.

Seasonable Suggestions—Muck and Draining.

The present drouth is making heavy inroads into the profits of the farmer. For severity it is in many places quite without a parallel during the present age of men. Pastures look browner than after the latest November frost—the corn crop had been so severely checked that some farmers long since plowed it up to sow buckwheat,—and now they are about to plow up the buckwheat to sow wheat. Cattle have already began to consume the fodder intended for next winter's use. But a single year of loss should not dishearten enterprising and thrifty farmers, among so many in succession that give abundant products, and especially should they look about them to see if this unusual state of things cannot be turned with peculiar advantages to profitable account. We shall furnish one or two suggestions of this character, and the practical farmer will doubtless think of many more.

Every observing cultivator has had an opportunity of seeing this year the great advantages of "high farming"—or in other words of deep tillage, high manuring, and thorough management. *Deep and rich soils* suffer incomparably less than others. We have now crops growing on land worked a foot or more deep with subsoil and trench plow, and well manured, that grow with great luxuriance and appear to hold the drouth in sovereign contempt. Other land plowed in the ordinary manner, is unable to retain the moisture, and the plants are perishing. In other cases, a copious application of *manure, well mixed* with the soil, has imparted such early vigor to the crops, that they have in a measure grown beyond its reach. *Seasonable attention*, has again obtained signal advantages. Oats, sown almost at the departure of the winter's frosts from the soil, have given an abundant increase, while some that have been sown out of season, will not be worth cutting—if indeed they can be cut without a pair of fine scissors,—to say nothing of raking with a pocket comb. Now, we know that all these points of good farming and good management will not wholly avert the evils of drouth, but they will certainly greatly mitigate their severity. We therefore earnestly commend *good farming*, as one of the best means for preventing similar disasters in future, even if an occurrence of like severity should not happen. Drouths of some magnitude are met with every few years, and should be guarded against by those who wish to insure uniformity of profit.

There are certain actual operations for which the present season is peculiarly adapted. High cultivation cannot be given to land without the assistance of abundance of manure,—and this abundance is very largely promoted by securing at the proper season a good supply of well dried peat, muck, or turf. Peat or swamp muck is, when wet, more than five-sixths water; and therefore if dug and carted in winter or at any wet season, the work is attended with a vast amount of unnecessary labor, in the removal of so much water. At the present time many muck swamps are comparatively dry, even among those that have never been drained, and which are commonly inaccessible on this account. Large masses might now be thrown out into heaps, and protected from the weather, so as to become well dried for winter application.

Those who do not enjoy the benefit of swamps, may secure supplies for a similar purpose from low, rich, wet pastures, or from wet waste grounds, not otherwise of much value.

The present unusual season also affords great facilities for draining swamps and marshes. Ditches may be cut through places which from their usual wetness, would be attended at other times with double or triple the labor now required. Light, dry muck may be shovelled out with great rapidity, but when soaked with water, it is not only performed with greater labor, but the flowing in of water renders the work especially disagreeable. Every farmer who possesses low, wet, worthless or poor land, should seize the present opportunity to give it a thorough draining. We could give instances almost without number where lands of this character have been increased more than ten fold in value by efficient ditching, one or two years crops in some instances fully repaying the cost of the whole

operation. The product of such land was originally flags, sedge, and other worthless growth; when made dry, the most luxuriant crops of timothy took their place, and when a portion of upland soil has been spread over the reclaimed muck, the addition of clover has been quite successful. Such land has also afforded the finest crops of corn; but where the soil is nearly clear muck or peat, and consequently more liable to frost than more compact soils, it has been found necessary to plant a little later, so as to escape the frosts of spring, and to use a sort ripening early so as to avoid those of autumn.

Open drains are required when a large amount of water flows off in the wet season. Such drains should be furnished with sloping walls of stone if practicable, to prevent the banks settling down—a very common cause of failure in open drains through swamps. Such channels as this are only needed as a main or central outlet. All the smaller may be covered. If *tile* are used they should be supported beneath by being laid on a plank or slab, and be covered with a portion of brush laid lengthwise, to prevent their settling out of place. But in many instances *brush drains* will answer every necessary purpose. These may sometimes be made with almost incredible cheapness, by using the brush-cleanings from the land—it being only necessary to deposit them with the butts pointing down the current, and with the branches and leaves at the top—which diposition is effected by simply beginning at the upper end of the drain and working downwards—treading the whole down with the feet, and covering with soil, after having inverted a coat of turf or tussocks. Brush drains will last many years. If much water is expected to flow through them, the addition of two large poles a few inches apart may be best, the brush being laid diagonally across them.

Drained swamps and marshes are often difficult of tillage at first, in consequence of the great number of hard knots or tufts formed by the roots of larger growing ferns. Some of these may be cut off by a sharp paring-plow; others can be only removed with a spade ground sharp. Those which cannot be reduced by being deposited in successive layers in the manure heap should be piled in a heap, and when dry, reduced to ashes by burning.

Gypsum on Wheat.

MESSRS. EDITORS – Will you or some of your experienced correspondents, inform me of the probable effect of sulphate of lime as a top-dressing on wheat in the spring? Please state the quantity used per acre, and the increase of wheat resulting from such application. A SUBSCRIBER. *Cedar Fields, Isle of Wight Co., Va.*

As a general rule, it is impossible not only to give the precise increase per acre, but to say whether there will be any increase at all, by the application of any special or specific manure, as for example sulphate of lime or gypsum, without trial in each region or neighborhood. In some places, and especially on the clover crop, its effects are wonderful—in other places, of little value. We have scarcely ever found an instance where the spring application of gypsum has benefitted the wheat crop—it may, however, on some soils. But as it commonly helps the growth of clover, it is best to sow it on wheat;—as the clover crop of course always follows wheat under good management. Our correspondent will find on page 198 of the third volume of the Country Gentleman, and on page 145, current volume of the Cultivator, a communication from D. A. BULKLEY, of Williamstown, Mass., giving the results of many experiments with gypsum on wheat, and particularly of its very successful application when sown in autumn.

Inquiries.

I have, for a few years past, put a solution of hen-dung on my melon plants, to keep the bugs off. I wish to know the proportions of dung and water that should be used, and how long it should be allowed to stand before using. I planted some melons late this season, and as they were coming up, I went over them with the above preparation, and it being as I supposed too strong, it appeared to prevent their coming up in the hills where they had not already appeared.

Are vines, and crops generally, injured materially by being hoed when wet with rain or dew?(1.)

Can you tell me what is the best work, partially or wholly devoted to ventilation of dwellings?(2.)

Is there any cheap way to obtain a good supply of water in low ground in pastures, for stock, in time of drouth?(3)

We had a sucking calf *tied* under an apple tree that bore very sour green fruit, and it caused the diarrhea very severely. Would it be safe to let young calves run in a pasture, of not more than one-quarter of an acre with 3 or 4 large bearing trees in it, when the apples were green? A SUBSCRIBER.

(1.) Crops are not injured by cultivation in wet weather, unless the soil be clayey and so wet as to be worked into an adhesive mass like mortar, or so as to make it harder by subsequent drying.

(2.) Downing's "*Country Houses*" contains a chapter on ventilation with many valuable suggestions. Allen's Rural Architecture has likewise some useful remarks. If we remember correctly, (for we have not the work at hand,) Wightwick's Hints to Young Architects also contains something on the same subject. In adopting Downing's views, one of his errors should, however, be guarded against—that is, that stoves poison the air—an error that many others who cannot think for themselves, have implicitly adopted. Downing held that "the air that passes over the surface of hot iron becomes loaded with the vapor of arsenic and sulphur, which that metal, highly heated, constantly gives off." How is *iron*, a simple substance, to give off constantly these two different and distinct substances? Suppose, however, the iron to be not quite pure, and to contain a ten-thousandth part of sulphur, and a hundred-thousandth part of arsenic, how long will they "*constantly*" pass off, and fill the air of a room, and never be consumed!! Great men sometimes indulge in sublime nonsense,—and our correspondent will of course guard against this error, in reading the chapter on ventilation in the *Country Houses*. A stove-room should, however, always be freely ventilated.

(3.) Water is obtained for cattle from springs, wells, roofs of buildings, outlets of deep ditches, and natu-

ral streams. It may be pumped up with a chain pump by hand; by a water-ram from a stream, or by wind-power from either. Our correspondent knows best which of these sources of water he has, and can judge best which mode of elevating will be most applicable. A barn roof will commonly afford water enough for a herd of cattle, if the cistern is made *large enough* to hold its rain water, which is scarcely ever the case.

The other questions we cannot answer from personal knowledge—will some of our correspondents do so?

Reclaiming Wet Lands.

Mr. Tucker—I have a "Beaver meadow," which is almost of no value. Its subsoil is a blue clay, and is overflown in the spring, and in the summer cracks badly, and grows up to weeds and bulrushes. I am a new beginner at farming, and would like your advice, (or that of some of your excellent correspondents,) *how* to make it productive and profitable. Freshman.

We take it for granted that there is a good layer of decayed vegetable matter upon the blue clay subsoil; and if so, our correspondent has only to give the ground a good thorough underdraining, (for which we have given directions at length in former volumes,) laying the ditches at regular intervals so as to render the whole as dry as the driest upland, and it is then ready for the commencement of cultivation. It should be plowed at a proper depth, which depth can be only determined by a personal examination of the effects, and of the depth of the surface soil and nature of the subsoil,—stable manure with some ashes applied,—and then sown to grass, or planted with corn or potatoes.

Substitute for Guano.

Messrs. Editors—What shall we substitute for guano? In my answer to this question, as found in the Country Gentleman of Aug. 10, I proposed urine not only as a substitute for guano but every way equal to it, in all the elements of fertility, for though deficient in phosphate of lime, it is much richer in the elements of ammonia. I now, in the second place, propose *ashes* as another important substitute for guano. Ashes, though destitute of the elements of ammonia, are richer in all the salts that constitute a rich manure, than guano. To prepare, then, a universal fertilizer, equal to the best guano and superior to any of the phosphates, superphosphates or artificial guano, prepared by Prof. Mapes or any other American Prof., I would propose to the farmer to make a compost of his barn-yard manure and ashes. And when I say barn-yard manure, I include the *urine* with the solid. In this compost, I would also put the excrement of the family, with all the waste suds, and whatever absorbents, may be used to save the urine and the suds. I see not how the farmer could add to the *quality* of such a compost. If he wish to add to the quantity of his manure, he may add any amount of common salt and *air slaked* lime, with smaller quantities of the different salts of potash, soda and magnesia. Such a compost could be made by any and every farmer and mechanic or professional man even, and at a cost less than half that of guano or any of the phosphates or artificial mixtures, now offered for sale. I am almost every day inquired of, relative to the value and use of the different fertilizers, now advertised for sale in the cities, and my invariable answer is, make your own *guano* as I have above directed. Or, at least, exhaust your *own resources* before you purchase foreign manures. J. L. Edgerton. *Georgia, Vermont.*

An Experiment Proposed.

Messrs. Editors—I propose through your most valuable paper (if you deem it proper,) that some of your correspondents try the following experiment, and report the result through the same. The experiment is intended to decide that long contested question—"Do manures *ascend*, or *descend* in the soil, or *remain where they were first put?*"

Take a pail or box, put 9 inches of the soil you wish to experiment on in it; now put about 4 inches of manure—any manure you wish, say *barn yard manure*—on the earth, and over the whole, put a layer of about 6 inches of earth—the same kind as the first mentioned. Expose the pail or box, containing the above, in some open place, that the weather may have full effect on the same—the effect it would have if the soil and manure were in the ground. After a while,—say from 3 months to a year, carefully take off the top soil—mark if any difference, caused by the action of the manure, has taken place in the same—how it has affected the soil, if at all. Now look at the place where the manure was placed—see what action has taken place—whether the manure has dissipated all of itself amongst the soil placed on or over it, or whether any remains, without any admixture of soil—or, as it was put in. Look now to your soil which was placed under the manure. See whether the manure has descended into it or not; and now you will be prepared to form a conclusion.

If the soil placed above the manure, is in any manner changed by the manure, except that part immediately in contact with it—it may be taken for granted that *manure does ascend in the soil.* If you now look at the under soil, and find it also changed by the manure—does it not indisputably prove, that *manure does descend in the soil?* If you find the action of the manure, on both soils, as above, the conclusion come to, is—*That manure both descends and ascends in the soil.* If *neither* the soils were changed, and the manure remained where it was put, we naturally arrive at the conclusion—*That manure remains in the soil, in the place where it is put, until taken away by crops of plants or weeds.* If such is the case, hence the propriety of thoroughly intermingling manure and soil, for the plants to have full benefit from the same; as, if put near the surface, the plants only receive nourishment from it while young, and its roots* soon extend far beyond its influence. If put in *deep*, the plants receives no nourishment from it while young,—which they greatly want to give them a vigorous start

* This does not apply to *grasses.*

and strengthen them at the most critical period of their growth. If they have not food ("*manure* is the *food* of plants,") when young, they droop and die; if not when stronger and older, they will soon grow weak and follow the first. Whereas, when manure is thoroughly mingled with the soil, from *top to bottom*, the plants have food at all seasons of their growth, and "multiply exceedingly." Hence, how careful the agriculturist should be in applying manure.

If manures remain in the ground where they were first put, they should be thoroughly mixed with the soil to give the plants food *whenever they need it*. If it descends in the soil, it should be put *near the surface*—within three inches—not *on* the surface, as it is certain some of the gases in manure—such as ammonia, will evaporate when exposed to the sun. It also strikes me that rain will have such effect on the *soluble* portion of manure, as to *wash it in the soil*; that some of the soluble portion of manure, which could be *washed* into the soil will evaporate by the action of the sun. For that reason I would not put manure *on* the surface, but a few inches below. Thus the young plant receives nourishment from the manure while it is near the surface, and as the manure gradually descends into the soil, so does the roots of the plant, and in this manner the plant is continually being enriched by the same. It is certain, if manure acts in this manner in the soil, it is most advantageous to the agriculturist who cultivates such crops whose roots run deep—which most crops do. For, suppose manure *ascends* in the soil, it must be buried very deep to last any length of time, and so the young plant cannot receive any benefit from it—(it will also be shown, that the *old* plants receive none unless the manure is buried to a great depth,)—so they must be manured "in the hill," increasing the labor and the expense. As the roots of the plant descend, they soon extend beyond the reach of the manure put "*in the hill*," and for a time, if the soil does not contain it without the manure put in *for the crop*—the crop receives no nourishment. but, as it is about to "give up," the manure, which was buried deep, ascending and acting upon the plant, it gradually revives and continues for a time, in the middle of its growth— as long it feels the effect of the manure to grow luxuriantly; but alas! the manure constantly rising, and the roots of the plant descending, or even if they do not descend—they soon separate—the manure is off, the plant is drooping.

Which of the three doctrines is right?

To find an answer to the above question, was this experiment proposed.

Will the editor of the "Cultivator" give his views on the subject? K.—*—J.

We think experience has already demonstrated that the more thoroughly the soil and the manure are pulverised and intermixed, the greater will be the influence of the manure upon the crop.

Liebig, whom some one lately saw at Geneva, expressed his pleasure that he was appreciated in this country by Mr. Mapes. He will get along now.—*Prairie Farmer.*

Weevils in our Peas.

Messrs. Editors—Some days since I discovered these insects in my green peas, from the smallest to the largest, without any exception whatever; in the small ones, I found it in the form of a maggot; but in the larger, it assumed the form and appearance of the weevil.

This may be seen by peeling off the skin which encloses the pea, (this should be done with the fingers;) then you will perceive one or more dark brown spots; each of these contain an insect. I think that if it was generally known that green peas contained these insects, there would be but few grown; therefore I am led to think that there is but a few who know compared to those that do not even suspect it. H. L. Tiffany. *Southington, Conn., Aug.* 8.

Seymour's Seed Drill.

Mr. Tucker—Agricultural implements and machinery are at the present time receiving more attention from the public than they have formerly done, and if I am not mistaken are destined to receive far more attention than they now do.

Farmers as a class are slow to adopt anything new, but necessity will compel them to adopt improved implements and machines.

It is but a few years since the horse-rake came into use; now a farmer would almost as quick think of getting his hay without a pitchfork as without a horse-rake. A few years ago it was thought impossible to use a horse-rake on any land that was not perfectly smooth and level; now a farmer would be loth to mow a meadow that is so rough that he cannot use the horse-rake. It is but a few years since the drill came into use; but wherever it has been used, fo far as I am informed, it is universally approved. The great difficulty of getting agricultural laborers that can be depended upon to sow a field of grain as it should be sown, will induce the farmers to try a machine. When they have once used a good machine they will be loth to return to the old tedious practice of sowing by hand. I find that the opinion is almost universal in this section that the drill cannot be used except on very smooth land; in fact it is not two months since I was of the same opinion. I am now satisfied from actual experiment that a drill will work well on any land that a Geddes harrow will work well upon.

About the 1st of July I procured a drill of Mr. P. N. Seymour of East Bloomfield, Ontario Co. I must say that it far exceeds my most sanguine expectations. I have sown several fields of buckwheat with it, (some of them quite rough) I have turned stones out of the ground as large as two stout men could lift, without injuring the drill in the least. It will sow all kinds of grain and grass seeds better than the most experienced person can by hand. It can be regulated to sow any desired quantity to the acre; it will also sow lime, plaster, bone dust, ashes, &c, broadcast or in drills It will sow grain and grass seed at the same time. It is easily managed, and not liable to get out of order.

Yours truly, Henry Keeler. *South Salem, N. Y., Aug.* 15, 1854.

Improvement of Soils.

Draining and manuring are the principal means which have *hitherto* been employed for improving the condition or composition of soils. Almost all agriculturists—certainly all inquiring and well-informed ones—are now pretty well acquainted with the advantages to be derived from the above-named methods of improvement, and are thoroughly convinced that all judicious expenditures, either in the way of draining or of manuring, will or may be made to pay. The agricultural community do not need great additions to their knowledge on these points. But there is a method of improving soils, to which the attention of farmers has not been, as yet, much directed. We refer to that method which consists in adding to soils those *earthy* substances in which they are deficient. Some little has been done in this way in the case of gardens; but in the case of fields or plow-lands, very little has been attempted, principally, we presume, from the generally prevailing opinion that labor expended in this manner "will not pay."

This opinion we are inclined to think an erroneous one in many cases. Where labor is scarce and high it may be true; but where there are quite a number of boys in a family and several teams on the farm, and work not crowding in the fall and early part of winter, we think that this opinion may stand in the way of making some additions to the too sandy, too clayey, too mucky or too something else soil of a field, which would render that field much more productive, causing an increase in the crops from it for many years, which would amount to a large percentage on the cash value of the labor expended on it. From what we have witnessed in the case of some gardens and some patches for corn-culture, to which sand, meadow muck and composts of various kinds had been added so as to alter the composition of the soil very much,—as, for example, changing a hard clay, almost all the season too stiff to be worked with hoe or otherwise, into a loose, friable, dark-colored loam—we are very strongly inclined to the opinion that, in many cases, as when labor is not extra expensive or when good markets are not remote, a large outlay in making needed alterations in the composition of soils would be better than investing the money at an interest of 10 per cent. As small experiments of this kind, comparing the outlay with the increase of products as far as that can be done, would be the most likely way of banishing erroneous opinions, and of leading to the general prevalence of right ones, we would urge those who can spare the time and labor at any time from this date till the setting in of winter, to make trial on some small patch of garden, meadow or corn-ground. Let clay, clay marl, sand, gravel, meadow muck, &c., be drawn out upon the soils which need such additions; let these additions be spread equally over the surface in the spring and the results carefully noted. These results will not consist wholly in increased productiveness of soil, but there will be, besides an increase of crop, a greater facility and pleasure in cultivation, an opportunity of raising crops for which the soil was formerly unsuitable, and, probably, a more obvious and ready return from the application of manure.

Minute details and specific directions are scarcely admissible on this subject. Some allowance must be made, and some variation in the mode of procedure according to the special wants of the soil, and especially according as this or that addition to it can be had within a short distance. In general, however, the application most likely to be beneficial may be determined by attention to the following principles. Light sandy and gravelly soils, upon which, perhaps, wheat cannot be raised to any advantage, are benefited by additions of clay, clay marl, peaty earth or meadow muck, or a mixture of all of these in a compost with stable and barn manure. Clay soils, again, are benefited by additions of lime, sand, gravel, loamy sand, and peaty earth. Any of these separately, or a mixture of several of them will alter for the better the composition of such soils, and render them more friable, fertile, and easily cultivated. Upon both these kinds of soil, and indeed upon almost every variety of soil, peat earth acts favorably. It should always form a part of any mixture which is added to a soil, if it can be had conveniently.

To these general directions we will add a brief account of two experiments, of the kind we are recommending, which have fallen under our observation, and from the details of which a hint or two may be gleaned for the guidance of those who are disposed to continue experimenting on this subject. In the first case, the spot most convenient for a garden on a new farm, was one of hard, stiff clay. An attempt was made during the first year to make the soil of this garden more friable and loose by plowing in a very liberal supply of long or undecomposed manure. This, however, seemed to have little effect. Next year leached ashes were spread freely upon a part of this clay garden, perhaps two inches deep, but with very little effect in making the soil looser, or more capable of being hoed in warm dry weather. During the fall or early winter of another year enough of meadow muck was drawn upon the garden to cover the whole surface to the depth of about two inches. This was intimately mixed with the clay to the depth of 8 or 9 inches the first year, by spading, raking, &c., and from that time to this, that soil has had quite a different appearance, has been much more productive, never gets baked, compact or hard, and admits of the weeds being pulled up with much more ease than formerly. In the other case there was a peaty meadow and much clay soil upon the farm. Near by, however, was a sand hill, from which could be taken any quantity of pretty fine and pure sand. In the fall of each year, for quite a term of years, enough of sand was drawn from this hill to cover a pretty large barn-yard to the depth of 5 or 6 inches. This was spread out evenly with the hoe so as to be a good soft bed for the cattle. Being fed around this yard and sleeping in it at night, almost all the droppings of the cattle and all the urine fell

upon this sandy bed of the yard. When the surface became unsightly and so that the cattle could not readily find a clean place to lie down, the plow was taken out and run through this sand, and a new, fresh, clean surface turned up. Such was the mode of management during the winter. In the spring, at convenient times, this sand was all hauled out upon the farm, sometimes upon the low meadow, but generally on the upland grass land. From cart or wagon two men, one at front end and the other at the hinder end, scattered it as far as it would go. The natural meadow became gradually less mucky, and more fit for the growth of herds grass and subsequently of crops of corn. The clay land became more loose and friable, and when the dressing did not extend all over the field to which it was applied, the difference in the color and growth of the grass, and in the amount of the hay was quite observable. One field which had more of this dressing than any other became changed from a stiff, compact clay to a loose, friable clayey loam, and, with a dressing of meadow muck from the cleanings of the ditches, assumed a dark appearance resembling those rich low soils which abound in carbonaceous deposits. These fields can now be plowed or hoed at times when, as formerly, they would have been hard and compact almost as a brick.

In both the cases referred to it was thought that the outlay was a fund well laid out—yielding a very satisfactory interest yearly.

Mediterranean Wheat.

Messrs. Editors—Among the several varieties of wheat cultivated, it is a matter of the greatest importance to know which is the most profitable kind to raise, taking every thing connected with it into account. Mr. A. Y. Moore, well known as an intelligent and enterprising farmer, of Schoolcraft, Mich. has communicated to his agricultural brethern, in the Aug. No. of the *Michigan Farmer*, some of his experience as a contribution towards the determination of the question above named. Seventeen years ago he procured about a pint of Mediterranean wheat from New Jersey, and has been so well satisfied with it from year to year ever since, that he now raises no other kind. Among the advantages of this kind of wheat Mr. Moore names the following:—It has always, without exception, proved to be more productive than any other kind; it makes good flour and a good yield; it is not at all affected by the fly which is becoming so destructive to some other kinds; it ripens early; and, lastly, it has never been affected with rust nor smut. The bread made from the flour of Mediterranean wheat, it is pretty well known, is not so white as that made from the flour of some other varieties; but Mr. M. thinks this bread is decidedly better.

Among the disadvantages attaching to this kind of wheat there is but one of any importance. Most buyers will not pay as much for it per bushel as they do for white wheat. Mr. M. thinks that this objection will hold good only where there is but little of it raised, as millers do not like to mix it with white wheat on account of its darker color. He adds that nineteen-twentieths of all the wheat raised on Door Prairie, Indiana, is of this kind, and that the farmers there find no trouble in selling it, and at fair prices. Mr. M. says he would prefer to raise it, however, even if he were obliged to sell it at 10 per cent. less than most other varieties.

Mr. Moore has recently floured a quantity of this wheat. "The yield was very good and flour excellent." He thinks that 100 lbs. of the offals is worth as much for any kind of stock as 100 lbs. of oats.

Perhaps some of the readers of this may have some experience on this subject which might be of *use* to the farming *public*. A.

How to Use Swamp Muck.

Mr. Tucker—What is the best mode of using swamp muck, or is it really worth any thing at all? I have a large pond near my barn, from which I can obtain any amount of muck. I have several times carted out a considerable quantity of it, but have never been able to satisfy myself that it would pay. Several years since I spread a number of loads on a dry sandy piece of land, but could not perceive any effect at all from it. Any information in regard to the best way of using it, through the columns of the Cultivator, would oblige. J. Hurlbut. *Gales Ferry*

We have occasionally given in back numbers of this journal, directions for the intermixture of swamp muck with stable manure, for spreading upon land. If the present drouth continues, we would recommend our correspondent to cart out on dry ground, all the muck practicable. If he has now a quantity of stable manure on hand, he may make a large pile of compost near the pond, by placing the muck and manure in alternate layers, each only a few inches thick,—the thinner, the more perfect will be the intermixture. There may be twice as much muck as manure; and if he could sprinkle over, say a twentieth or so, of fresh or leached ashes, all the better. Such a pile as this would form a most valuable compost. If the layers are very thin, carting and spreading will intermix it sufficiently.

If no manure is now to be had, cart out the muck into heaps to dry, and cover it with long straw, slabs, or boards, to prevent its becoming soaked by fall rains. In the winter, it will then be light and easy to draw, will not freeze into lumps, and may be spread over cattle yards to become mingled with the droppings, or may form compost heaps by successive layers as just described. The drier it has been kept, the greater will be the amount of liquid manure it will absorb,—the richer it will be,—and the greater will be the saving it will effect.

Muck, applied unmixed directly to land, does not usually produce a striking effect—sometimes its benefit is very small. There is a difference in the quality of the muck—and when applied to land already well supplied with vegetable matter, it is of course only taking coals to Newcastle. The effects however, last many years. Doubtless, if our correspondent had *measured* accurately the results of his experiment, he could have perceived more sensibly its advantages.

Importation of Cattle.

Messrs. Morris and Becar of New-York, have recently received from England, an addition to their already extensive importations, of which we find the following notice in the Boston Cultivator.

They came in the steamer Hermann, which landed at New-York on the 2d Aug., and are as follows:

Duchess 66—bred by Thomas Bates—rich roan; calved October 25, 1850; got by Fourth Duke of York (10167,) dam (Duchess 55th) by Fourth Duke of Northumberland (3649,) ——(Duchess 38th) by Norfolk (2377,)——Duchess 33d) by Belvedere (1706,)——(Duchess 19th) by Second Hubback (1423,)——(Duches 12th) by the Earl (1646,)——Duchess 4th) by Ketton 2d (710,)——(Duchess 1st) by Comet (155,) ——by Favorite (252,)——by Daisy Bull (186)——by Favorite (252,)——by Hubback (319,)——by J. Brown's Red Bull.

Duchess 66th was purchased in 1853, at the sale of the stock of the late Earl Ducie, by L. G. Morris & N. J. Becar, for £735 ($3675), a larger sum than is known to have ever been brought by any other cow. She is of medium size, for the breed, and is almost perfection in the points aimed at by the leading breeders of Short-horns. A heifer calf of hers, by Duke of Glo'ster, was left in England, being too young for shipment.

Oxford 6th—bred by Thomas Bates—red; calved November 6, 1846; got by Second Duke of Northumberland (3646), dam (Oxford 2nd) by Short Tail (2621),—— (Matchem Cow,) by Matchem (2281), —— by Young Wynyard (2859).

Oxford 6th was purchased at the sale of Earl Ducie's stock, by J. S. Tanqueray, for £215,5s., and was sold by him at the same price to N. J. Becar of New-York. She is a cow of great size and substance, but by no means coarse. We have seldom seen her equalled in fineness and symmetry by one so large.

Miss Belleville—bred by John Mason Hopper—roan; calved Feb. 1853; got by Belleville (6778,) dam (Carnation) by Goldsmith (10277,)——(Crocus) by Petrarch (7239,)——(Violet) by Forester (3825,)——by son of Fleetham (2028,) from the herd of Mr. Whitaker, of Greenholme.

Miss Belleville was engaged of Mr. Hopper by Mr. Becar, last season. She will be a decided acquisition to Mr. B.'s herd, as she possesses a strain of valuable blood which is very rare in this country, and is, individually, nearly a *model*. Her sire, Belleville, was the most remarkable prize taker of any bull ever bred in Great Britain. He took the highest prizes in the class of Short-horns of the Royal Agricultural Society of England, the Agricultural Improvement Society of Ireland, the Highland and Agricultural Society of Scotland, the Yorkshire Agricultural Society, and after receiving all these honors, capped the climax by carrying a sweepstakes of £70 ($350) at the show of the Highland Society at Glasgow in 1850, against twenty competitors.

Stoppage of Milk.

In your August number of the Cultivator, N. N. inquires for a cure for a stoppage in cow's bags. I have never known an instance such as he describes, until within ten years, since which time I have had three cows affected in precisely the same way, and have known of two other instances in cows belonging to my neighbors, all of which have been cured in this way: Take both hands to milk one tit. With one, press the milk down from the udder, and with the other milk it out, applying as much force as the cow will bear with both hands. The difficulty will gradually diminish, if sufficient force is applied in milking, until in two weeks an entire cure will be affected. T. L. Hart. *West Cornwall, Ct.*

Cost of Making Pork.

The following estimate of the cost and profit of pork raising in Ohio has been furnished me by N. Hunt, a very intelligent farmer, and although not, like an Almanac, calculated for all meridians, may serve as a basis for other regions as well as this.

He estimates the cost of the pig, at two months old —for keep of the sow, &c., as equal to two and a half bushels of corn, or 63 cents. The next *four* months at pasture, as equal to 2 bu. corn or 50 cents. The next 6 months—the first winter, as equal to 3 bu. corn, or 150 cents. The next six months at pasture, as equal to 6 bu. corn, or 75 cents, and the cost of fattening as equal to 16 bu. corn, or 400 cents, making the entire cost $7.38.

The offal will pay the expense of slaughtering; and under this mode of feeding, the hog will weigh about from 275 to 300 pounds, worth on the average 3 cents per pound, so that the farmer will get from nothing to $1.62 for the labor of rearing each pig, provided he does not lose any by sickness or by accident; and he also saves the manure they make, to enrich his farm.

Each reader of the Country Gentleman, can judge if the above estimate be fair, and if he can make pork raising profitable. C. *Cincinnati, Ohio.*

Cure for Scratches in Horses.

Take good fifty per cent rum, put in as much copperas as will dissolve, and wash the horse's feet and legs as far as you can feel any bunches, two or three times a day. It will cure in a few days. I am no horse doctor, but always doctor my own, and have as few lame as my neighbors, who employ a doctor. I have recommended it with perfect success, where other remedies have failed. The scratches, is something you must kill, before you can heal so that they will not break out again. Copperas and rum will do it Grease the legs a little after you are sure the scratches is killed. A Farmer. *Littleton, N. H.*

Sale of Ayrshire Cattle in New Brunswick.

Mr. Gray's sale of Ayrshire stock took place at Oak Park, near Frederickton, N. B., on Friday the 21st ultimo. In addition to farmers from different parts of the Province it was attended by agents from the Central Board of Agriculture of Nova Scotia, and the Digby Agricultural Society of the same Province; the former of whom bought to the extent of 7 animals costing $400.

The bull "Jock the Laird," and several of the cows were withdrawn for want of sufficient competition, but the former was afterward sold by private sale to the Nova Scotia Agricultural Board, at the reserved price of $120. Some of the best of the bull calves sold at $40 each, and the yearling and two year old heifers from $36 to $60. On the whole the sale was not remunerative to Mr. Gray for the expense he has been at in importing and keeping his stock pure—a circumstance due, partly, to the farmers of New Brunswick not being yet sufficiently forward to appreciate the be-

nefit of improved stock, and partly, to Mr. Gray not having offered for sale the class of animals most sought after. Yearling bulls and two year old heifers, are what the farmers in this country seem most to run upon for breeding from, a fact Mr. Gray and others raising stock for this kind of sale, would do well to keep in mind. A CORRESPONDENT. *New Brunswick, Aug.* 20.

Heaves in Horses.

MESSRS. EDS.—If you or your subscribers, know a cure or preventive for heaves in horses, please state so in some number. DAVID STEWART. *Strabane, C. W.*

Heaves (*broken-wind* of the English,) is a disease caused by poor, innutritious and dusty or musty food, working hard on a full stomach, irregular feeding and working, &c., superadded to a hereditary predisposition. The prevention, is good and nourishing food, plenty of oats regularly given, water in moderate quantities at a time, green food and especially carrots, and avoiding hard work with a distended stomach.

There is no cure for the heaves.

But its symptons may be mitigated, and the disease in a great measure *suspended*, by the same treatment as for its prevention, just stated, and especially by *always cutting the animal's fodder and giving it wet, with meal*, and never more than a small pail of water at a time; at the same time taking care that he cannot eat his bedding, by giving him a short halter. Giving *ginger* only affords temporary relief.

If our correspondent will turn to p. 105 of the first volume of the Country Gentleman, he will there find a humorous and instructive article from the pen of HENRY F. FRENCH, entitled "How I bought a horse, and how he had the heaves," which will afford some valuable hints on this subject.

Farmers should Save their own Clover Seed.

[The following practical directions on saving the seed of clover,—a crop on which the fertile condition of the farm, and the growth of fine crops of wheat, next to manuring, most depends,—are worthy of the attention of our readers at the present time, when the period of ripening the seed is approaching.]

The quantity of clover seed sown the present season in Kentucky is probably greater than in any former year. The quantity reported in the daily papers, as received by the steamboats at this port, between the months of November and April, is 11,800 bushels. This it is presumed, will hardly equal one-quarter of the amount that has found its way into the State at other points, so that we may safely estimate the entire receipts of clover seed into Kentucky at 50,000 bushels, which, at an average price of $5.25 per bushel, amounts to the sum of $262,500. This seed is chiefly the product of Pennsylvania, Ohio and Indiana, but by far the largest portion is from Ohio.

From the Patent Office report for the year 1851, we learn that the quantity of clover seed saved in Ohio in that year exceeded 100,000 bushels, which, at the average market price, brought a return to the farmers of that State of over half a million of dollars.

The estimate of the entire annual crop of clover seed for the seed-growing States of the Union is set down at 1,000,000 bushels—worth over $5,000,000.

With proper machinery for gathering and cleaning the seed, it is one of the most profitable crops grown. Indeed the labor of harvesting and cleaning constitutes the whole cost of production, as clover necessarily enters into the system of *rotation* of the crops of every good farmer, and in securing the seed by the most improved methods nothing is removed from the land but the heads of the plant, leaving all that remains to enrich the soil.

The spring growth may be either cut and cured for hay, or it may be pastured by cattle; the second growth of the season being the most productive of seed. All that is required for saving and preparing the seed for market is a Seed Harvester and Huller. One of the most complete and effectual clover and timothy seed harvesters has been invented and patented by J. A. Wagener, of New York. This machine consists of a simple frame or box mounted on wheels, in front of which is a cylinder, set with spiral knives, acting in concert with curved spring teeth, in combination with a straight knife which forms a perfect shear, and severs the heads from the stalk, which are at the same time discharged into the box, the cylinder being guarded by an adjustable guard plate, allowing the heads, and the heads only, to pass to the cylinder, leaving the stalks on the field. The teeth being made to spring and vibrate, not a particle of clover, however stalky and thick, can possibly escape being cut, or allow the teeth to become clogged. This machine is so constructed that it can be made adjustable to the height of clover and timothy.

With the aid of one horse and a boy, this machine will harvest *twelve* acres per day.

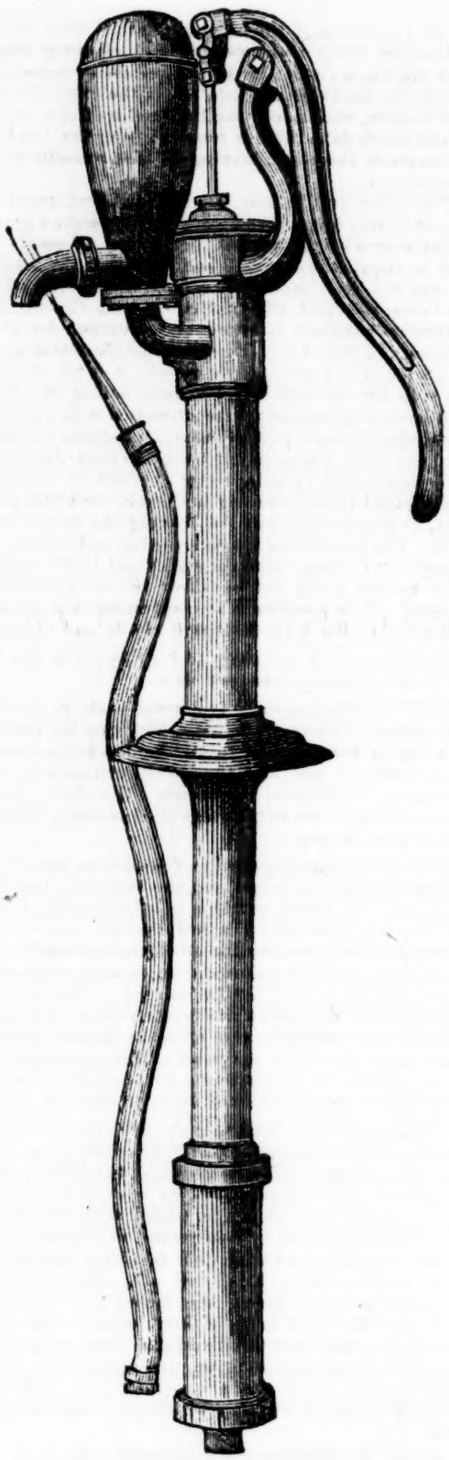
Of Clover Hullers there is a great variety, more or less perfect in their operation, which can be procured at a cost of from $30 to $100. Some of the cheaper ones, however, are inefficient and such as we would not advise our farmers to procure. Crawford's patent Clover Huller, now extensively used in Ohio, is probably as good as any.

When but a small quantity of seed is required to be hulled, farmers sometimes use the ordinary threshing machine. In doing so they nearly close the front of the feeding space with a board, leaving only a small opening sufficiently large to crowd in the chaff. The back side is also closed, except an opening at the opposite corner from that left for feeding. The spikes in the cylinder, being set spirally, force the seed from one side of the concave to the place of discharge on the other, thus removing the hull. This operation, however requires to be repeated several times, in order to thoroughly separate the hull from all the seed.

When a farmer wishes to save seed only for his own sowing, it is not essential that it be cleaned, as it will vegetate equally well when sown in the chaff. Every farmer may gather what seed he wishes to sow by a cheap and simple machine, which with the use of a few tools may be easily constructed, as follows: Make a box, say three feet wide, four feet long, and one foot deep, with the forward end left out. This should be placed on runners, about nine inches wide forming a kind of sled; teeth made of hard wood, about fifteen inches long, one inch thick and one inch wide at the top and half an inch wide on the under side. These should be placed about a quarter of an inch apart forming a kind of comb by which the heads are gathered.

A field of clover properly managed will yield from 1½ to 3 bushels of clover seed per acre. At an average of 2 bushels per acre, 20 bushels and upward may be gathered in a day with the improved seed gatherers, and much more than that quantity can be hulled and cleaned with the same, of the best machines.

In many of the clover-growing States, a very profitable business is carried on by persons providing themselves with seed harvesters and hullers and traveling from farm to farm and gathering and cleaning the seed on shares, giving the farmer one-third to one-half the crop.—*Louisville Journal.*



Engine Force Pump.

The above cut represents an "Engine Well Pump," manufactured by Cowing & Co., Seneca Falls, N. Y., and furnished by them at $18, including hose and discharge pipe. It combines, say the proprietors, the principles of atmospheric pressure or suction with the Force Pump, and having an Air Chamber connected with it, is calculated to throw a constant stream It is adapted not only to the ordinary uses of a Well Pump, but also to the washing of windows, buildings, and vehicles, and the extinguishing of fires. Having an Air Chamber it combines all the principles of a Double Acting Fire Engine! With three feet of hose and discharge pipe, water can easily be thrown over a two story building, and with sufficient hose can be carried over the entire premises. This we deem one of the most practical and useful improvements of the day, since every house in town or country may have not only the conveniences of a good Well Pump, but at the same time be always supplied wtih a first rate Fire Engine. The working Piston of this Pump is some 3 feet below the platform of the well, where is a small let-off which entirely prevents its freezing, if the well is covered tight.

Directions.—When used as a Common Pump the hole in the top of the Air Chamber should be left open; when used with the Hose it should be perfectly tight.

PREPARING POULTRY FOR MARKET.

We have often noticed the careless and slovenly manner and little attention paid to the external appearance of poultry offered for sale in our markets; and we have likewise noticed the ready sale and higher price where due regard was paid to have the skin all sound and clean; the breast not mutilated by a long cut, the shrinking skin exposing the drying meat covered with hay seed or chaff, but well covered all over with fat, of a rich golden yellow. Much of the poultry exposed for sale has been through the process of scalding to facilitate the picking; this practice should never be resorted to. It turns the rich yellow of the fat into a tallowy hue, and oftentimes starts the skin, so that it peels off, unless very carefully handled. No cut should be made in the breast, all the offal should be taken out behind and the opening should be made as small as possible; the inside wiped out with a dry cloth, but no water should be used to cleanse them. with a moist cloth take off the blood that may be found upon the carcase. In picking, great care should be taken not to tear the skin; the wings should not be cut off, but picked to the end; the skin of the neck should be neatly tied over it, if the head is cut off. Most people like to see the heads of fowls left on—it makes a better show. The heads of ducks and geese should not be cut off.—*N. E. Far.*

Much care and attention is required after the poultry is dressed and cool, and it should be carefully packed in baskets or boxes, and above all, it should be kept from freezing. A friend, who was very nice in these matters, used to bring his turkeys to market in the finest order possible, and always obtained a ready sale, and the highest price. His method was to pick them dry, and dress them in the neatest manner; then take a long, deep, narrow box, with a stick reaching from end to end of the box, and hanging the turkeys by the legs over the stick, which prevents bruising or disfiguring them in the least.

Too much should not be exposed at a time for sale, nor should they be hauled over too often. Appearance is everything with poultry, as well as other articles, and has great influence on the purchaser.—*Bement.*

Poultry-Feeding.—Poultry should be fed regularly until wheat and oats are harvested, as this will prevent them from straying into the fields. When they have once acquired the habit of getting into the growing crops, hand feeding will, probably, not prevent them from straying.

The Drouth and its Effects.

Eds. Co. Gent.—We have had, and are still having, very dry weather—a season which will be remembered as very unprofitable by many farmers. This season has eminently shown the importance of taking time by the foretop, and cultivating the ground thoroughly. Those farmers whose soil was dry enough to plow and sow early, and who pulverized the ground, thoroughly with the roller and drag at the time of seeding, have realized good crops of barley and oats

On the other hand where the land was wet and undrained—plowing delayed till May when the drouth came and continued, poor crops were the result.

This season has also shown the great superiority of a clay soil to withstand the drouth. A field which seemed to be the best corn in our town about the first of June, is now the poorest. It is a sandy loam and its stalks are now quite dry and earless or nearly so.

April with us was a wet month, yielding 7. 8-10 inches of rain and melted snow. In May we had 2.82 inches rain and most of that was at the commencement of the month. During the month of June 3.58 inches of rain fell, of which 2.8-10 inches fell in the space of two successive days. One sudden violent shower gave over two inches; of this a large portion ran away into the streams and ditches. July afforded about an inch of rain, and the second day of August we had ½ an inch of rain, since which we have been favored with none. I wish every farmer would have a thermometer, barometer and rain gauge and keep a register of the weather. The cost of the whole would not exceed fifteen dollars. The barometer enabling him to foretell storms and rain, would soon repay the cost. The barometer and thermometer can be purchased in most of our cities and villages, but the ombrometer or rain gauge can be partly constructed at home, to facilitate which I append a description of one recommended by the Smithsonian Institution. It consists of a zinc funnel—two graduated cylindrical glass vessels and a reservoir. It should be placed in an open space away from trees, buildings or any thing which may have a tendency to increase or diminish the quantity of rain which would naturarily fall into the funnel whose surface should be placed about six inches above the ground.

Directions.—Place in the ground a cask or barrel, watertight, the top rising above the ground about three inches; cover it with boards slightly inclined in the form of a roof, which project on all sides beyond the edge of the barrel at least a foot. A circular opening in the middle receives the funnel, the borders of which rest on the board. At the bottom of the barrel to receive the water, is an earthern or metalic vessel with a narrow neck (an ordinary earthern jug will answer) in which is placed the end of the funnel exactly filling the opening. It must contain about three quarts or a gallon. The funnel is fastened by means of two clasps to the board, which must be covered up with sod to make it like the ground itself.

To make the observation, remove the funnel and pour the water from the jug into the large graduated glass cylinder. The opening of the funnel being one hundred square inches, one inch of rain in depth gives one hundred cubic inches of water; and each division of the glass containing a cubic inch of water, each of them represents a hundredth of an inch of rain fallen into the ombrometer. These degrees are large enough to permit us to measure the thousandths of an inch. The divisions of the smaller graduated glass cylinder will measure directly the thousandths of an inch, and it may serve in cases of accident as a substitute for the larger one.

The weather has such an important part in the economy of the farmer, that it surely must be very useful for him to note and foresee its changes. In a word the possession and right understanding of the above instrument will render him weather-wiser and happier, and render his home more attractive. Yours truly, S. B. Buckley. *W. Dresden, N. Y.*

Mediterranean Wheat.

Messrs. Editors—Since sending you an account of the experience of Mr. A. G. Moore, of Michigan, in reference to the different kinds of wheat, and a brief statement of the reason for which he prefers Mediterranean to all other kinds, we have met with some corroboration of Mr. Moore's views in *The Genesee Farmer* for August. Speaking of the attack which the weevil has made on the crop of this year in western New-York, and of the great alarm caused by it, the editor says: "In a recent visit to Cayuga county, where the fly has prevailed longer than it has in the Genesee valley, we found the brown Mediterranean wheat nearly exempt from the attacks of this depredator, while the different varieties of white wheat were nearly destroyed. Plump Mediterranean weighs some four or five pounds more per bushel than either the white flint, blue stem, or Soule's wheat, and the flour of the former is 'stronger'—that is, it will imbibe per 100 pounds, more water, and yield more bread than the flour of white wheat; and therefore, bakers in cities, who sell bread by weight, like it. It has however, a thick hard bran, and the flour is comparatively dark colored." Dr. Lee adds that Mediterranean is better than no wheat, but thinks that farmers in the Genesee valley will rather reluctantly engage in its cultivation. Perhaps the advantages which this kind of wheat possesses over most or all other kinds, and which were stated in our former communication may go some way towards inclining the farmers in that region to make a trial of it.

If any of your readers should have received so much damage from the weevil this season as to discourage them from attempting to raise wheat for next year, but should feel inclined by the statements in this and former article, to venture to try the Mediterranean variety, notwithstanding the common prejudices against it, we would suggest to them that they will find in *The Cultivator* for 1851, several additional statements in regard to this kind of wheat, which will probably be sufficient to turn the scale in favor of making a trial of this early, hardy, sweet, fruitful and every way excellent variety. A.

Treatment, Value and Application of Manures.

Translated for the Country Gentleman by Sam'l W. Johnson,
FROM THE GERMAN OF PROF. WOLFF

Treatment of manure in the yard or dung-pit.—Three points must be attended to in a rational treatment of yard manure.

1. The original virtue of the manure must be almost perfectly retained. 2. The whole mass should be made as far as possible of uniform quality throughout. 3. The process of decay or fermentation should proceed neither too rapidly nor too far; nor should the manure shrink too much in bulk. The importance of both the first mentioned qualities is self-evident, and in reference to the third point, it need only be remarked, that while the nature of the soil and climate are often to be considered in determining how far manure should be rotted; yet generally, a medium between the two extremes is to be recommended.

The manure must be spread evenly as soon as removed from the stable. If it be left with an irregular surface, with heaps here and there, the drying and fermentation will not proceed uniformly, and the quality will be different in different places. Care should be taken that all loose material, be well stamped down, as in such places the rotting goes on with great rapidity and loss may ensue. Also under certain circumstances in cavities and unpacked litter, mouldiness appears which extends to the neighboring manure, and it becomes lumpy and balls together. In these portions of the heap further decay is thus checked, and the uniformity of quality is spoiled. Experience has also proved that such mouldy manure acts injuriously when applied to fields just before sowing.

In cases where dung has become quite mouldy, it is often necessary to overhaul it, and pack it down anew in layers, each of which should be drenched with the liquor of the cistern. Between them layers of muck may be interposed, or the whole may be mixed up as a compost. It is to be recommended that the different kinds of manure be well mixed together; so that for example, horse-dung which heats so readily, be interposed in thin layers between the cattle dung, and not left to accumulate in one place. Especially important is it that the yard manure be thoroughly trodden down. By this means the access of air, and consequently the too rapid fermentation of the mass, as well as loss of volatile ammoniacal matters is hindered. To accomplish the proper packing of the manure, nothing is better than to allow the cattle to spend some hours daily upon it. The heap must in this case not be kept too wet, and it is well to spread a little straw upon it, in order to attract them to it, and induce them to lie down upon it. This is especially to be recommended when the manure is transferred from the stable only at intervals of 14 days or thereabouts. In continued dry and hot summer weather, the surface of the manure loses its moisture, and air finds access; so that shortly too rapid fermentation sets in, and ammonia escapes, as is indicated by the smell. Bailey found that manure from the stall which contained but 56 pr. ct. of moisture, evolved as much gaseous ammonia upon drying at the temp. of boiling water, (212°) as would be equal to ¾ of a lb. for a load of 1600 lbs. of fresh manure. In the same amount of horse-dung, he observed a loss by drying of more than 1½ lbs. This loss is much greater when a powerful manure in an advanced stage of decomposition, is allowed to dry in free air. I found for example that sheep-dung which had been collecting in the stable during three summer months, and contained 71 pr. ct. of moisture, lost ½ of a pr. ct. of its weight of ammonia in being dried at 212°. This calculated on a load of 1600 lbs. is nearly 6 lbs. having (in Germany) a value as manure of 75 cts. In the dry dung remained ¾ pr. ct. of ammonia, so that by drying, it lost ½ of its nitrogen in the form of ammonia.

The loss by drying is of course prevented by maintaining a certain degree of moisture in the manure. To accomplish this the contents of the cistern formerly described are intended to serve. This liquid should be pumped up—and by means of movable troughs distributed over the whole surface of the heap, and indeed so often and in such quantity, as the heat and drouth make necessary. The whole art of preparing a good yard manure, consists in great part in a careful regulation of its amount of moisture, for this must be neither too great, nor too small. Where too much moisture is present, it is liable to become cold, and sour; and humus-like bodies are formed which act unfavorably upon vegetation: while in absence of sufficient moisture the ammonia escapes into the surrounding atmosphere. By maintaining the manure moderately moist throughout its entire mass, a fertilizer will be produced, preserving almost entirely the original virtue of the manure, and in a form well adapted to promote the growth of crops; and this without employing chemical fixing-agents, as plaster, sulphuric acid, &c., whose application on the large scale is often too costly and troublesome. Swamp-muck, peat, brown-coal powder or any earth rich in vegetable matter, may often be economically employed to assist in retaining ammonia. Whichever material be used, it should be strewed as a thin coating over the surface of the manure, from time to time, during the summer; and be kept moderately moist by occasional *drenchings with* the contents of the cistern."

The application of chemical agents will be noticed in the next article. Trans.

Lime for Sorrel Lands.

Editors of "The Country Gentleman"—Your subscriber J. F. B. of Otsego Co. N. Y. "inquires of some practical farmer, the cheapest, and best mode to pursue with his land, to kill out the sorrel, and make it produce again." He writes, that one neighbor says *sow* lime, another says *sow* ashes, and a third says *mix* the two, with gypsum or plaster, and the sorrel will disappear. We have had some twenty years experience in farming, and in the use of lime and other fertilizers, and think that his neighbors are *none* of them

very wide of the mark, provided the mixture is in the right *proportion*, and the right *kind* of an *instrument* (a shovel) is used—for we never in our practice found a man, with a *hand large enough*, to sow lime or ashes, on land that really required such a dressing. That the land of your subscriber is deficient in the first named ingredient, the fact that it is covered with sorrel (which he intimates is natural to the soil,) *we* regard, almost, as conclusive evidence—far more reliable han any of the *five dollar analyses* he could obtain. We can look back to the time when *white-washing* the land, was, comparatively speaking, first introduced in this section of country, when some of our (so called) grass or pasture fields, in their appearance, might almost have induced a stranger to suppose they had been *red-washed*; but the sorrel *now*, has very generally disappeared, and there are few farms in our county (along our public roads at any rate,) that have not been limed once, twice or thrice over.

From our own experience in this respect, we recommend your subscriber to make a free use of lime. If his land has been well manured from the barn-yard, and abounds with vegetable matters he might safely use 100 bushels per acre of shell lime or a smaller quantity of a more caustic kind. We speak of *slaked* lime—and would not recommend him to use it as a dressing for wheat, but think his timothy seed, sown with the latter, or rather just after it, and before the ground has been rendered compact by a fall of rain, would be much more likely to do well. Clover and timothy, generally speaking, are apt to fail with the oat crop, which rather smothers them out, it being liable in strong ground to *lodge*.

We have no doubt your subscriber will find, after the lime has been freely and intimately mixed and incorporated in his soil, the sorrel will gradually disappear—that the lime will neutralise and render harmless the acid, which now abounds, and on which the sorrel in great measure depends for its support and growth, and that when this effect has been produced, as sooner or later it will be (as more or less of lime shall have been used,) his land will *then* be in fit state to produce clover, timothy and other grass. Then perhaps he may find one or two bushels per acre of *plaster*, a good application to his clover early in the spring.

We can hardly refrain to recommend to the notice and perusal of your subscriber if he has not read the work, "Ruffin's Essay on Calcareous Manures." We incline to think that the theory advocated in that work in regard to the use of lime (or calcareous manures) and its effect on acid soils, has stood the test of time—has not been contradicted by facts, as some other theories of a more modern date have been, and that the work is a very useful one, especially to persons about to engage in liming and improving their land.

As J. F. B. seems to have the right kind of a *hand for sowing grass seed*—that is, sows it liberally—we hope in due time he will reap by the same scale or measure, and that one failure will not discourage him. C. W. *Salem Co., N. J., 8th Mo. 25th*, 1854.

Culture of the Strawberry.

Messrs. Editors—In reading the article on strawberry culture, No. 8, vol. 4, I was surprised that one well posted up as the Editor of the Horticulturist, should take such ground, and recommend a course for garden or extensive field culture, in some respects, so radically defective, (or at least so to my mind.) Now I believe that he cannot sustain himself, when he says that strawberries, will generally in beds produce small insipid berries, and of course unfit for market. I will say that as far as my experience goes, it is directly opposite, for I have sold about three thousand quarts this season, mostly Hovey's and many of them were an inch and five-eighths in diameter, and they were grown on beds two and a half feet wide, and averaging a plant to every five or six inches on the bed. I am not an advocate of letting all the runners grow till they have made the bed one solid mat, but do contend that strawberries may and should be grown in beds, because it is attended with less trouble, and vastly more worth can be obtained from an acre, for I have grown at the rate of seventeen hundred dollars to the acre at twenty-five cents a quart, and I know of others doing as well.

And here let me say that I have never protected my beds in winter, or mulched the alleys in summer; nor have I ever had any trouble in selling them, but could to-day engage the next year's crop to any fruit dealer in our market; which by the way knocks down, I think, another position taken by the Editor, which is, that every system of culture which stops short of stirring the soil around each plant is defective. It seems to me perfectly clear that to put out strawberry plants three feet by eighteen inches, would require five acres to get as much worth as can be obtained from one acre of beds properly managed; besides it is no small operation to cut straw to mulch ten or twelve acres. And here I will say that I do not know of a single horticulturist in this vicinity but what cultivates in beds, and I should be willing to have our exhibitions compared with those that are grown in rows.

My advice to those who intend to put out strawberries for field culture, is, to put out your plants as early in April as the ground will do to work, in rows two feet apart, and one foot in the row, and let the runners take possession of every other space until the plants will average one to every five or six inches, and not to allow runners or any thing else to take possession after that. I would not set myself up as possessing all knowledge on the subject of strawberry culture, but have given my experience, which, if good for any thing can be adopted—if worthless rejected. Practical. *New Haven, Ct., August*, 1854.

Sterling Pear.—We have been favored by Dr. H. Wendell of this city, with samples of this fine summer pear which is said to be a seedling, raised by a Mr. Sterling in the western part of this state. It is of full medium size, handsome, of good flavor, and must be a valuable addition to our list of early pears.

The Housewife.

ELDERBERRY AND GINGER WINE.

Mr. Tucker —On reading the Aug. Cultivator, I see that you are in want of a receipt for making Elderberry wine. With pleasure I send one.

Take three quarts of black Elderberries, when quite ripe, to a gallon of water and four pounds of brown sugar, a little root ginger and a few cloves. Boil the berries and water half an hour—Strain them, and then boil the wine and spice together about an hour. Skim the froth as it rises. When it is boiled, let it stand till almost cold; then add a teacup full of yeast, and let it stand three days. Then barrel it, and let it stand four months, when it may be bottled, with a lump of sugar in each bottle. Cork tight, and keep in a cool place. Age improves it.

I send you another simple receipt for making Ginger wine. Take 4 quarts of water and 5 lbs. of moist sugar, to 2 ozs. of best root ginger—bruise it and boil all together three-quarters of an hour. When cold, add a little yeast, barrel it for a week or ten days—then bottle it with a lump of sugar in each bottle. In 4 weeks it will be fit for use. J. H. Rawlings. *Butternuts, Aug 14th.*

Messrs. Eds.—In your No. 2 Vol. 4, of Country Gentleman, a subscriber calls for a recipe for elderberry wine. An English woman gave me the following, which a trial has proved to be first rate.

To 1 gallon of fruit, add 1 gallon of water, and boil for 15 minutes. Strain off and measure the liquor. Take any kind of sugar, and put 4 pounds to 1 gallon of liquor, ½ an ounce of cloves, 1 ounce of ginger—boil the spice with the liquor, and when lukewarm put in yeast and let it work one day before bottling. Then bottle loosely, and let it stand for a month before using. I have the wine two years old, at which age it is a very refreshing and healthful beverage—truly good. R. J. W. *Sheffield, Ill.*

WHEAT FLOUR, BOLTED AND UNBOLTED.

It is said that there are of nutriment peculiarly favorable for the growth of the muscular system, in every 1,000 lbs. of wheat, about 28 lbs. In every 1,000 lbs. of flour only about 20 lbs., and in every 1,000 lbs. of bran, about 60 lbs. To please the eye and the palate we sift out the most nutritive part of this grain, and seek a substitute for it in the consumption of animal food, &c. There is yet another loss or disadvantage from this rather foolish fastidiousness. The bolted flour will not go nearly so far as the unbolted. If, in a given time, eight persons will consume 40 lbs. of fine flour or the usual product of one bushel of wheat, then it would take a considerably longer time for them to consume that flour with the addition of several pounds of coarser material. This saving from the use of unbolted flour would be greater than just in proportion to the increase in weight of the unbolted above the bolted article, for the former contains the most nutriment. It would be certainly within the limits of truth to calculate that four bushels of wheat would go farther in the unbolted state, than five bushels bolted. This is no contemptible consideration at present prices of wheat and flour. To this may be added the fact that unbolted flour is most conducive to health.

READY RELIEF FOR BEE STINGS.

Messrs. Editors—We have noticed occasionally for a year or more recommendations of an application of liquid hartshorn or *aqua ammonia* to the stings, of bees, wasps, &c. as a means of certain and speedy relief. Though rather slow to put much faith in many of the recommendations and cures of which some old women, with large marvellousness and an easy credulity, seem to have a never-failing supply, we were, notwithstanding, inclined to think favorably of this particular one. Accordingly we had it stored away in our memory to be ready for trial on the first opportunity. That opportunity not having yet occurred, we took the more especial notice of a little item of information which we found in an account of some 'Rambles' which Mr. S. B. Noble puts on record in the Aug. No. of *The Michigan Farmer.* Intruding himself among the bees belonging to some of his kind entertainers farther than they thought was becoming or proper in a perfect stranger, one of them undertook to teach him a lesson in regard to keeping a proper distance, and in order to get this lesson effectually instilled and fixed in his memory, used on Mr. Noble's neck the instrument which Providence has furnished to this little instructor for the purpose of enforcing its lessons about keeping at proper distances. His neck he says, immediately began to swell and to be exceedingly painful. He applied soon two drops or thereabouts of a strong solution of ammonia—the common *aqua ammonia* of the shops—and the relief was instantaneous, the pain abating and the swelling subsiding in less than two minutes after the application, so that he would not have known that he had been stung from any unpleasant sensation then remaining.

If the above article were not at hand we should expect about the same relief from a strong solution of potash, or soda, or saleratus, or from alcohol or camphorated spirits, or muriated tincture of iron, or elixir of vitriol, or any dilute acid, strong vinegar, or other articles powerful enough to cause momentary and rather severe smarting in the wound. A.

GREEN CORN PUDDING.

This is one of the numerous rural luxuries which the farmer has always the power to obtain at small expense. The following is the recipe for making it:—

Take of green corn, full in the milk, twelve ears, and grate it. To this add one quart of sweet milk, one-fourth of a pound of fresh butter, four eggs, well beaten, pepper and salt as much as may be deemed necessary; stir the ingredients well together, and bake in a buttered dish. Some add to the other ingredients a quarter of a pound of fine sugar, and eat with sauce. It is an excellent dish, cold or warm, with meat or sauce; but epicures of the most "exquisite taste" declare for it, we believe, and with the first service.—*N. E. Far.*

A Fine Orchard.

Moore's New Yorker gives an account of the orchards of Austin Pinney, Clarkson, Monroe Co., N. Y., who has for several years past devoted himself to the collection and planting of fine fruit, and more particularly of peaches, for the best varieties of which he has ransacked the whole United States. The editor of the New Yorker states that he has 28 acres occupied with fruit trees, of which there are 3000 peach trees, and 2700 dwarf pears. Most of them have been set out about 3 years. They are stated to be exceedingly thrifty and healthy, many of this year's shoots being four to five feet long. The land was subsoiled before planting, and heavily manured with a compost of yard manure and muck. The soil is kept mellow by cultivation, but no annual crop is admitted, except an occasional crop of beans in the peach orchard. No wonder these orchards should be so widely celebrated for their thriftiness, with such treatment as this.

Increase your Manure Heap.

Messrs. Editors:—After all that has been written and published in our agricultural papers upon this subject, not half the attention is paid to it that its importance demands. At this time of extreme drouth, I have with pleasure noticed here and there, a farmer entering his swamps and muck beds and taking therefrom material for future use upon the farm. But such incidents are by far too few; every farmer that has upon his land any place of rich mould or vegetable deposite, which in ordinary seasons are too wet to get into without the labor of drainage, should improve the present, and all dry times, to cart to the compost heap, to the hog and barn yards what will help to absorb the liquids, retain the ammonia, swell the amount of manure and greatly enhance the fertility of the soil.

In this way we can, in a limited degree, counteract the deleterious effects of the drouth, for these enriching materials can be taken from their native and useless beds at much less expense than in common seasons. It is an old adage that "there is no loss without some small gain;" and now while we are losing extensively by the severe and protracted drouth, can we not gain a little, and not a *very* little either, by improving our advantages in increasing that which is so essential to keep up the fertility of our lands, and which is the base of all good farming, especially on our old New England farms.

Unfortunately for the writer, there is not a swamp or muck bed upon his premises; he has no such mine of wealth to resort to at this favorable time, or at any time, wherewith to enrich his lands, but he has some scattered materials common to all farms, such as turf upon the sides of the highway, the settlings in the ditches of the road, leaves in the woods which can be gathered in a wet time late in autumn, green weeds, thistles and brakes, the scrapings of the chip yard, and here and there a low place in the rough pasture lands from which a black loam can be taken and removed to the hog yard; and from these sources, with the addition of leached ashes, and corn cobs, into which has been thrown the suds from the wash tub, the wash from the chambers, &c., for a year past, sixty-four loads of first rate manure have recently been taken out of the hog yard and a small compost heap, and put on to two acres of land, which will soon be evenly spread and plowed to the depth of ten inches, designed for a crop of corn next year, and with a favorable season sixty bushels to the acre will be obtained.

Now for the benefit of myself, a brief, and I think nearly accurate computation has been made of the expense of these sixty-four ox cart loads of manure, and its value, connected with the expense of raising and fattening four hogs, with the market value of the pork; and if it is of any benefit to others, they have it for the perusal, but the best way to test their experiment is "to go and do likewise."

	Dr.
4 pigs, five weeks old, at $2 each,	$8 00
Interest 20 months, at 6 per ct.,	80
22 bu. corn each in raising and fattening—88 bu. at $1,	88 00
Feeding, tending, labor of scalding meal, fuel, &c.,	10 00
Labor of carting and getting material into hog yard,	12 00
Skim milk and whey from the dairy of 4 cows,	12 00
Butchering the 4 hogs, 50c. each,	2 00
Interest on cost of hog pen and yard,	4 20
	$137 00
	Cr.
Average weight of hogs at 20 mos. old, 400 lbs.—1600 lbs., at 7c.,	$112 00
Lard and other grease from intestines,	6 00
Value of 64 loads of manure in yard, at 1.25 per load,	80 00
Whole avails,	$198 00
" cost,	137 00
Profit, or $15.25 per hog.	$61 00

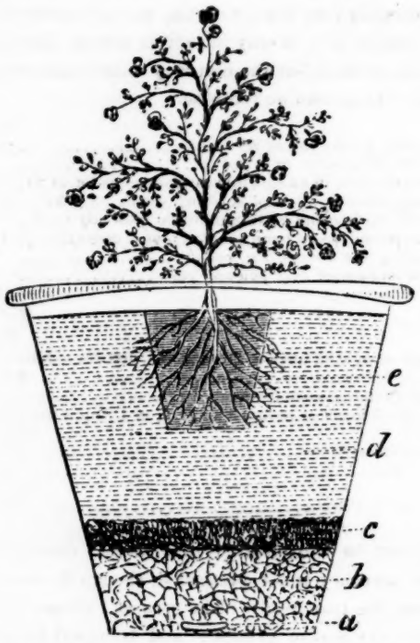
It must be remembered that in this computation perfect accuracy is not pretended, though it cannot be far from the true result. The corn at 1.00 per bushel includes the cost of grinding and transport to mill 3 miles and back; the labor of tending and feeding and keeping the yard supplied is not too high, neither is the interest, nor is the amount of corn consumed, though at first sight it might seem that the cost of the 1600 lbs. of pork is too high, and exceeds the market value by $19.00, not taking into account the manure, and had there been nothing added to the yard so as to get the benefit of the work of the swine it would have come out about even. But a decided advantage and profit is realized by this economical way of making manure, and I have long been of the opinion that pork making in New England above the wants of the farmer's table is not profitable unless connected with an economical method of manure making. The labor of adding material can be done at odd jobs and when other farm work does not drive, and nothing is more deserving the attention of the farmer than this. Every one will agree with me that whatever pursuit or business a man follows for his living, in order to become successful, must be well done; he should be competent, faithful, discreet and energetic, and not get above his business. And of all the occupations of life none require more constant care and unremitted attention than that of the farmer, though he need not make drudges of himself and family. J. W. Colburne.

Springfield, Vt., Aug. 29th, 1854.

The Flower Garden.

SIZE OF POTS FOR HOUSE PLANTS.

We often observe fine specimens of house-plants stunted and kept from a free growth, solely in consequence of being confined in small pots. The roots reach the sides of the pots beyond which they cannot extend, and running round through the soil gradually form a close ball of matted roots very unfavorable to the health and vigor of the plant. The remedy consists in giving them more space; and to render the



operation clear and intelligible, we give the above figure representing the appearance of the plant when removed to a larger pot, and the proper manner of filling it, where *a* represents an oyster shell or piece of crockery laid over the hole at the bottom; *b*, the draining materials, which may be broken brick, fragments of crockery, &c.; *c*, a layer of turf and the rougher portions of the soil, to facilitate drainage; and *d* the fresh soil, into which the roots are about to extend.

Some judgment is required in adjusting the size of the pots to the wants of the growing plants. They should not be too large, so as to appear unsightly from the disproportion between them and the plants. They should not be so small as to require too frequent a change, to prevent crowding among the roots.

SUMMER FLOWERS—GLADIOLUS.

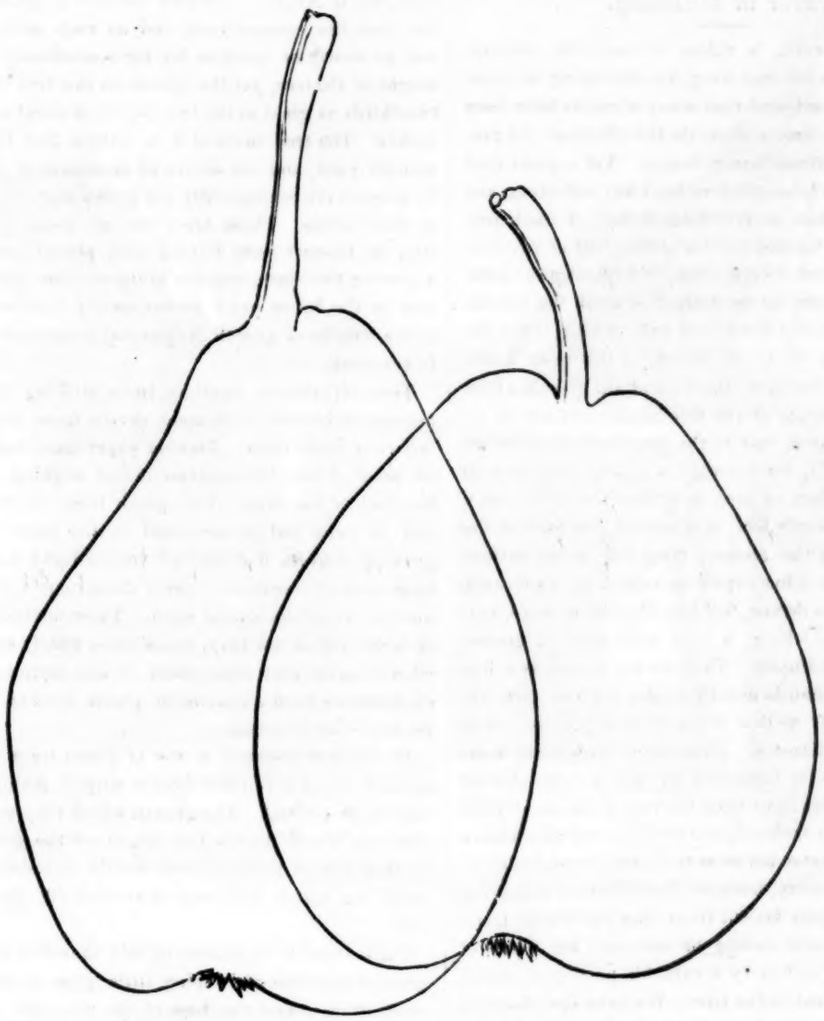
The genus Gladiolus, or sword lily, sometimes called corn-flag, furnishes some very beautiful ornamental plants. The common purple or Gladiolus communis, is one of our finest hardy plants. Newer, rarer, and still more ornamental and showy, are the two species represented in the accompanying figures,—the *floribundus* and *gandivensis*.

The Gladiolus floribundus, or many flowered sword lily, is remarkable for the exceedingly beauti-

Gladiolus floribundus.

ful flesh color of its flowers, marked with a bright red stripe on each petal. The flowers are large and spreading, double the diameter represented in the engraving. The leaves are long, broad and sword-shaped. It is a native of South America, and the bulbs are tender, requiring taking up from the open ground on the approach of winter, as one touch of frost will destroy them. They should be washed clean and kept dry till spring. Two feet of straw, chaff, or leaves, or enough to keep the ground from freezing, will obviate the necessity of taking up the roots.

The Gladiolus gandivensis, or Ghent sword lily, a hybrid, is without the enchanting delicacy of the preceding, but is a very showy flower, of large size having a fine rich orange scarlet color, relieved with yellow. It is three feet high, and blooms through the latter half of summer.



Louise Bonne of Jersey. *Flemish Beauty.*

Notices of Standard Pears.

Louise Bonne of Jersey. This fine old variety has long since taken the head of the list of mid-autumn pears on quince stocks. It seems to be entirely *at home* on this stock, and to succeed even better in most instances, both in the growth of the tree, in its productiveness, and in flavor, than when grown upon the pear. Dwarf trees will live to a great age, and continue to afford abundant yearly crops.

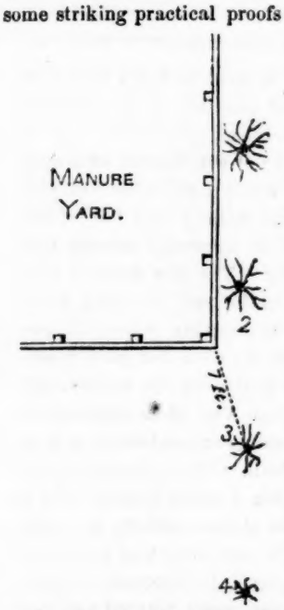
Although this variety is not first-rate in the flavor of the fruit, yet its good size, fair, handsome appearance, and the fine growth and great productiveness of the tree, render it eminently valuable, holding about the same place among autumn pears that the Baldwin does among winter apples, if such a comparison is allowable. A description is scarcely necessary—we may merely state that the fruit is rather large in size, the surface smooth, pale yellowish green, with a brownish, dotted, red cheek; flesh yellowish white, very juicy, melting, somewhat buttery, with a rich, fine, faintly sub-acid flavor. The growth is upright, shoots rather dark, and leaves coarsely serrate.

Flemish Beauty. It is hard to find a fruit that combines so many excellent qualities as the Flemish Beauty. The tree is handsome, productive, and of strong and vigorous growth; it will flourish on almost any soil, even on a gravel where many other sorts partially fail; the fruit is large, usually very fair, of fine form and appearance, with an agreeable melting texture, and an excellent flavor. The only defect is a liability to drop too soon from the tree, requiring picking in time. To be of the best quality, it needs house-ripening. The figure gives the form, but good specimens are not unfrequently double the size represented. The "Beurré Spence," which Van Mons declared to be the best of all the Flemish pears, and which so long puzzled pomologists to obtain without success, is now believed to be no other than Flemish Beauty. As a proof of the productiveness of this variety, we need only mention the fact stated last autumn at a pomological meeting at Saratoga, by T. C. Maxwell of Geneva, that he had trees seven years planted and two years old when set out, that bore two bushels each, in 1852, and over one bushel in 1853.

Error in Mulching.

We often observe, in riding through the country, that the benefits of mulching are becoming in some degree appreciated, and that many attempts have been made by this means to mitigate the effects of the present season's extraordinary drouth. Yet a great deal of it appears to be applied without any reflection, and is little better than no mulching at all. A small portion of litter is heaped up *close to the foot of the tree*, without one moment's reflection, or without any knowledge whereabouts the roots are that need the benefit. Now, it may be laid down as a rule, which is not far from correctness, that the length of the roots which radiate on all sides from the base of the tree, is about equal to the height of the tree itself—and not as we often hear it stated, only to the length of the branches from the top. If, for example, a young fruit tree is ten feet high, then we may infer that the roots form a circle about twenty feet in diameter, the base of the tree constituting the centre. Over this great surface the finer and more inconspicuous roots form a net-work of fibres; and to derive *full* benefit from manure, cultivation and mulching, a very wide space of ground must be operated upon. This, we are aware, is a larger allowance than is usually made, but our own observations satisfy us that it is more nearly correct than the ordinary estimates. There is one exception, however; and this is furnished by newly transplanted trees, whose roots have been cut very short on all sides in removal from their original locality, and which have not grown and extended so as to fill the usual circle.

It is not necessary, however, in order that manuring and mulching may benefit trees, that the whole territory of their roots should be covered, for a part of them will seize and carry a valuable portion of moisture and nutriment to the tree. We have just observed some striking practical proofs of this truth, which we shall illustrate by the annexed diagram, where 1, 2, 3, and 4, represent the places of a row of peach trees, standing on ground uncultivated the present year, and nearly covered with grass. These trees are about 8 or 9 feet high, and two and a-half inches in diameter; two of them (marked 1 and 2,) grow within two feet of a manure yard, under which their roots extend and receive nourishment, and although immediately surrounded at the foot of the trunk with dense turf, they have thrown out shoots the present dry season from *two* to *two and a half feet* in length. The tree marked 3, stands seven feet from the manure yard, and its roots must therefore go nearly or quite as far for nourishment as the height of the tree, yet the growth on this tree has been two-thirds as great as the two others, or about *eighteen inches*. The tree marked 4, is sixteen feet from the manure yard, and can derive no nourishment from it; its shoots have consequently not grown more than *three* or *four* inches. These trees are all about the same size, the manure yard having been placed there only a year or two since, and the branches from the central dots in the figure are intended merely to show the relative lengths of growth *the present season* on the different trees.



This experiment exhibits in a striking light the amount of benefit which trees derive from the *extremities* of their roots. Another experiment has afforded proof of the little advantage of working close to the foot of the tree. Two peach trees, of the same size as those just named, and in the same orchard growing in grass, had the turf removed and the ground kept clear of weeds, in a circle about four feet in diameter, about the base of each. These made a growth of about *six inches* only, while those wholly surrounded with grass grew about three or four inches. These experiments were all made on peach trees of a single variety—the Tillotson.

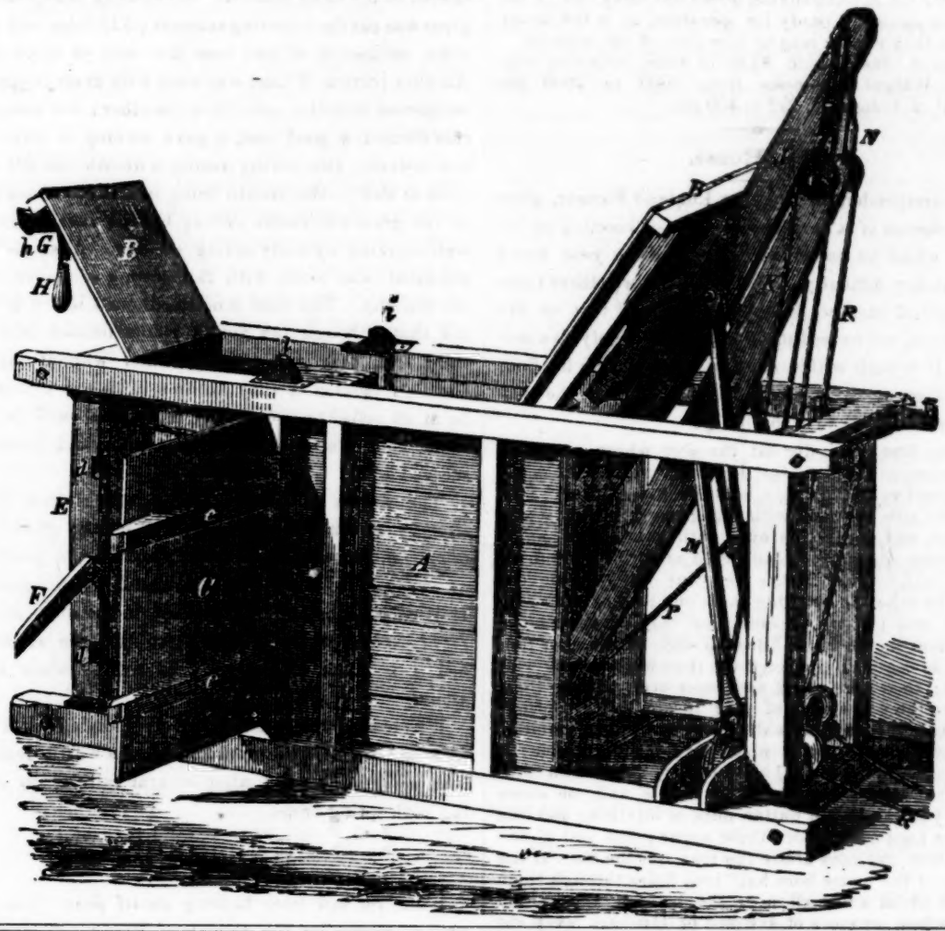
In another instance, a row of peach trees stood in old turf, about seven feet from a strip of manured and cultivated ground. The growth which they made this year was about double the length of the growth on another row of younger trees, wholly surrounded with grass, but which had been cultivated till the present year.

Cultivators, to be successful, will therefore avoid the common practice of heaping little piles of litter in a small circle round the base of the tree—for it is evident from the experiments we have just given, that the nutriment comes chiefly through the small fibres which are most numerous towards the extremities of the roots; and to attempt to feed them by placing the nourishment close to the trunk, is but little better than trying to give a man drink by pouring water into his boots, or than placing the oats for a hungry horse at the wrong end of his stall.

Mulching therefore, (except for young trees newly set out,) should be spread in wide circles, or over the whole surface, leaving the earth bare near the trunk where it is not wanted, and where it might serve to invite the attacks of mice.

NEW PLANT—DICTYANTHUS PAVONII.

This singular plant has produced several of its peculiar shaped flowers, which, in their general appearance when expanded, resemble that singularly offensive flower, *Stapelea pinnata*, except being somewhat lighter in color and without the offensive smell. The plant is a climber, and for its singularity worthy of a place in every hot-house, or perhaps warm green-house. Ours is growing in equal parts turfy loam and peat, in the hot-house. Edgar Sanders. *Albany.*



Dederick's Parallel Lever Hay Press.

This engraving is a perspective view of a press, adapted for packing hay, cotton, hops, hemp, &c., for which two patents have been granted to Mr. L DEDERICK of this city, the one dated 16th May and the other the 6th of June 1854. Mr. D. has furnished us with the following description. Our correspondent in New Brunswick, whose inquiry we published last week, will see that this press can be readily shipped to St. John.

This press differs from others in use, by its being operated lying horizontally, instead of standing upright. This position renders it much more portable, and every way more convenient. Having shoes attached underneath the frame, it can be easily and readily drawn from place to place, without loading on a wagon or being taken apart at all, so that wherever it is drawn it is ready for use. It is also more convenient to fill the box; being low, and the box being opened its entire length, so that one man can easily pitch the hay into it from the floor or ground, and another man can be constantly tramping it down in the box and not interfere with the pitching in.

The binding of the bale is readily done, standing on the ground, and is done with greater ease than will be believed without a trial.

The common method now in use, of locking wood hoops without nailing them, can be done in this press to the best advantage.

The engraving so plainly represents the several parts that particular description of the operation seems unnecessary. Suffice it to say that the frame lies down (as seen in the cut,) and the bale is pressed and formed at one end, standing on its end as shown through the side door which is partly open. The levers are represented as drawn back and the upper doors as opened ready for filling the box again.

The two levers are so arranged and confined together, that they operate parallel; and, producing an equable pressure on either end of the follower, keep it vertical as it traverses through the box.

The levers are drawn back by a small rope, and drawn downward by a larger rope by means of shieves suitably arranged. Both ropes pass to the capstan or horse-power, upon the cylinder of which either rope is wound alternately as the operation of the backward or forward movement of the follower is desired. The capstan is so constructed that the change can be made without removing the horse from the sweep or changing his direction. The door fastenings are very novel, and the doors can be easily opened with one hand notwithstanding the heavy pressure within.

This press is manufactured in this city at the Premium Ag. Works, by Messrs. DEERING & DICKSON. It is substantially built; all the parts liable to friction are of iron, and the whole is constructed with a strict reference to durability. In a machine exerting so great an amount of power the question of durability cannot enter too largely into the account, when a comparative calculation is made as to the price of such machines. This press has been in practical use for two years, and judging from the certificates and letters shown to us, received from parties using these presses, as well as the increasing demand for them, there is every reason to believe they give good satisfaction, and must come into general use.

For transportation, these presses are taken apart,

and with the accompanying directions, they can be put together again all ready for operation, in a few hours

Thus they can be sent to any part of the country.

Price of presses from $130 to $165, including capstan. Weight of presses from 1600 to 2000 lbs. Weight of bales from 250 to 400 lbs.

Ice House.

A correspondent of the New England Farmer, gives a description of a very cheap mode of erecting an ice house, which he has found to keep ice the year round without any difficulty. The whole cost was three thousand feet of lumber, 25 lbs. of nails, and four or five days work, not exceeding in all about twenty-five dollars. It is built within another house, which he finds to be of great advantage. The following is the description of his mode of buildi g:

In the first place, dig out the dirt where you wish your house to stand, to the depth of two feet, or more, if exposed to frost greatly, and fill up with stone, then put your sills on level with the ground, put in strong sleepers, and cover this over with three inch plank. Commence upon these plank with scantling, sawed one and a half, by four inches for your wall, laying one upon the other and nailing them one to the other; inside of this lay up another tier, leaving a space of about four inches to be filled up with sawdust, or tan-bark; so continue till you have it as high as you wish for ice; then take plank and cover over, having them come to the outer edge of your inside wall; continue on as before with your walls, until as high as you like, and cover all over with plank two inches double; if under cover no roof will be necessary more than this. Have two doors, one where the ice is, and one above where you can put in butter, milk or anything you like to have kept cool. Bore these upper plank full of two inch holes, the ones above the ice; and the ones at the bottom of the house bore half inch holes through them once in about a foot all over the bottom, and spread two inches, or more of sawdust or tan-bark over the bottom before putting your ice in. Pack the ice as closely as possible, not having it come quite up to the top and edge of your house, and when full throw sawdust, or whatever you may use, over the top, and also fill up between the ice and sides of the house and I will venture to say you will not be out of ice by reason of melting by July 20th. Joseph Blake. *Ashfield, August* 17.

Sowing Grass Seed in Autumn.

We have never succeeded so well in seeding land speedily and heavily with timothy, as by sowing about or before mid-autumn, or as soon as the moderately damp weather has fairly set in, and harrowing it lightly, without connexion with any other crop. It has always afforded a good product the following season, but not equal to that of the second summer. Several interesting experiments, corroborating the advantages of this practice, are reported by S. O. Knapp of Jackson, Michigan, in the Michigan Farmer. The land, which was new, had been in consequence of stone and brush, but very imperfectly plowed late in the autumn of 1851; and without further plowing the next spring, a heavy seeding of oats was applied, and thoroughly harrowed. The crop was good, and as soon as it was harvested, the ground was plowed and near the end of September, 8 quarts of timothy seed were sown per acre. A month and a half later, two acres more were seeded in the same manner. An equally heavy crop of grass was cut the following summer ('53,) from both portions, estimated at two tons per acre of dried hay. Another portion of land was sown with grass in spring, on ground in better order than the other; but although this formed a good turf, it gave no crop of hay. In one instance, late sowing during a drouth did not succeed so well;—the growth being small, about one half of the grass was winter killed; but the vacancies were well supplied by early spring seeding. A single experiment was made with fall sowing of clover, with the timothy. The time is not mentioned, but it is stated that although the young plants formed only the third leaf, they escaped the winter without injury. Our own opinion is that autumn-sowing of clover, to be at all relied on, should be performed early in autumn, and if a wet period follows, it would doubtless succeed well.

The results of the preceding experiments have strongly shown the advantages of sowing grass seed *alone*—mixed with other crops, they operate precisely as weeds, and choke it out of several months growth. It is very important, indeed, that it be sown at the *right season*; but with this precaution, we are satisfied it is much more certain of success when sown alone.

We observe in a late number of Moore's New-Yorker, a statement of the eminent success which resulted from early fall sowing, after several failures in seeding with spring crops.

Dwarf Pears.

We never saw finer bearing dwarf pears than the present season on the grounds of Bissell & Hooker and of Ellwanger & Barry, of Rochester, N. Y. The former showed us several *Bartletts* in a row, six or seven feet in height, bearing a good crop, and appearing in every respect as healthy and thrifty as trees of the same variety standing near them, on pear roots. Two trees of the *Louise Bonne Jersey* presented a beautiful appearance, both from their thrifty appearance and dense crops of handsome fruit. We never saw fruit trees of any kind more heavily laden—an acre of such would certainly afford a large pecuniary profit. Ellwanger & Barry have large numbers of fine specimen trees; and although the season has been unfavorable to some, others were handsomely loaded. A small tree of the *Tyson*, about four feet high, was profusely filled with pears, and we never saw a more beautiful picture than this graceful little tree with its trusses of ruddy cheeked specimens presented. It is to be daguerreotyped. The *Beurré Giffard*, on the same grounds, afforded specimens, notwithstanding the unusual season, having all the freshness, juiciness, and high flavor which in former years it has been found to possess. It ripens before the Tyson and Rostiezer, or about the time of Osband's Summer, and although much inferior in the vigor and beauty of the tree, is certainly decidedly ahead of the latter in the quality of the fruit. This and the Summer Doyenné are the two greatest acquisitions of late years among summer varieties.

Mcuntain Ash, &c. from Seed.

Messrs. Editors—Will you please inform me through the "Cultivator," when Mountain Ash berries should be gathered, and how treated to raise trees—the same of Balsam Fir cones. Also where in New-York City, "Downing's Fruit and Fruit Trees of America" can be procured. J. L.

Mountain ash berries should be gathered late in autumn when fully ripe—the seed separated by mashing and washing—and then immediately mixed with fine clean sand. They should be kept moist, subjected to the freezing and thawing of winter, and planted in a bed of fine mould, not more than half an inch deep. Shading from the hot sun may be necessary for the young plants.

Fir cones are gathered late in autumn, or just before opening to drop the seeds, and placed in a dry warm room till the seeds become capable of easy separation. They are to be planted in spring, in a bed like that for mountain-ash, and the young plants shaded from the sun as an indispensible requisite. It is much better and cheaper to procure the young trees from the forests or from nurserymen, than by the nice, troublesome, and slow operation of raising from seed under our hot suns.

Downing's work on Fruits, we believe is out of print. If to be had in New-York, C. M. Saxton, 152 Fulton Street, will furnish it.

Inverted Scions—Planting Chestnuts.

Messrs. Eds.—Can scions be made to live, set wrong end up? I have tried some, and never had one live.

I wish to find the best plan for sowing chestnuts for timber—the quantity per acre, and the time. Levi D. Markham.

It is not probable that inverted scions could be easily made to live, neither do we see any object for so strange a conceit. In former times, the lovers of oddities amused themselves by inverting growing trees, first bending down and burying the top, and afterwards loosening and elevating the roots, thus presenting a tree growing, roots upwards!

Chestnuts are so hard to transplant that it is better to plant at once the seed where the trees are to remain. The seed should be secured while perfectly fresh from the tree, and if not immediately planted, they should be packed in moist sand or leaf mould till wanted. If even the outside shall become dried, they will not grow. They may be planted in hills like corn, but rather more remote, and after a year or two all the plants thinned out but one in each hill. This will give an even uniform plantation, which will present a most beautiful appearance when the trees begin to assume the character of a forest. Cultivation should be given for a few of the first years.

Disease in the Bark of Fruit Trees.

Messrs. Editors—Can any of your correspondents give any information as to the cause of young fruit trees, in apparent thrifty condition, having dead spots appear near the ground, of various sizes, some reaching nearly half way around the trunk? The bark soon becomes dry and hard, and then comes off and leaves the wood dry and hard. Some of my trees have been set 4 or 5 years in grass lands, and manured by digging away the top of the ground, then putting a bushel basket of good manure, and then replacing the earth again. This is done in the spring. Any information in regard to the cause or remedy will oblige me and perhaps others. T. S. Hoyt. *Walton, Del. Co.*

Our correspondent does not mention what *kind* of fruit trees are thus affected. This disease is not new, but cultivators differ as to its cause. A bushel of *unmixed* manure applied to a tree, would be hurtful in most instances and cause a succulent unhealthy growth, which would be liable to injury from changes of the weather—and this may be the cause in the present case. Manure should be applied *in autumn*, and in spring be well mixed with the soil by spading. Compost is best.

Market Pears.—If you wished to plant a pear orchard of standard trees in rich sandy soil, with a gravelly subsoil, on an elevated site in this country, exclusively for marketing purposes, and had daily railroad access to the Pittsburgh market, and was restricted to three varieties, one of which should be an early, one a fall, and one a winter Pear, what kinds would you select? L. *Allegheny Co., Pa.*

The *Bartlett*, *Virgalieu*, (or Doyenne) and *Easter Beurre*, the latter on quince. Some would perhaps prefer the *Louise Bonne Jersey* on quince, or the *Flemish Beauty* on pear stock, for autumn varieties, or the *Winkfield* on either pear or quince, for a late sort. The latter would perhaps prove more profitable than any other, from its great productiveness.

To Destroy Tanzy and Live-forever.

Answer to H. Stone's Inquiries.—Spade the turf about six or eight inches deep, and throw the whole mass, tops, roots and all, into the hog-pen. Should any more appear the next year, or any time after, let the same process be continued; and two or three trials, if not the first, will annihilate the whole or any other foul stuff.

The raising of tanzy can be made profitable. I once had a neighbor that made himself independent by raising tanzy and mint for the distillery. But somehow, I never liked the idea of raising tanzy and mint, or even hops for a living; for while it might bring wealth to the grower, it would add nothing to the permanent, productive wealth of the nation. There are men whose minds never reach beyond a bed of mint, and whose aspirations never ascend higher than a hop-pole. Let such men devote their minds and their lands to such purposes. But let men of broader minds consecrate their lands to better purposes, and devote their lives to such labors as will not only enrich themselves but add to the permanent wealth of the nation.

There is another consideration. There is no vegetable, more wasting to the fertility of the soil, than tanzy, while it adds the least of any to its fertility by being turned to manure after having been used. J. L. Edgerton. *Georgia, Vt., Aug.* 26, 1854.

☞ The telegraph informs us that the Ohio State Fair has been postponed to the 17th—20th of October.

Imperial Establishment at Rambouillet for the Breeding of Merino Sheep.

Probably some of our readers may derive a few useful hints from the following items of information in regard to the above very celebrated establishment in France, which are derived from an account of a visit paid to it in the month of July last, given in the North British Agriculturist of Aug. 6.

The above-named national establishment for the breeding of the pure Merino sheep has heen in existence for nearly seventy years, during which time the greatest possible attention has been generally bestowed to maintain the Merino in the highest state of cultivation. In the year 1786 the King of Spain made a present to the King of France of a small flock of Merinos. These upon their arrival in France were sent to the farm connected with the domains of the Royal Castle of Rambouillet where the stock has since received every care in order to keep it up to its original perfection, or improve it if possible. The establishment at R. is about 30 miles from Paris.

In judging of the excellence of particular animals, the following points seem to be most particularly attended to. The horn is much looked to in determining value, and open horns, not too closely placed together in the head, are especially esteemed. The expression of the eye should be placid and mild; the upper lip thin and flexible and the lower lip thick and firm. The skin should be loose on the face and neck. At the top of the head, and where the head and neck join, there is a pad of gristle. This is hard and slightly movable in its place. This development increases with the age of the buck, and is another element in judging of value, being an indication of energy of constitution.

The form of the body of the Merino in most esteem may be best understood from the following measurements which are those of two of the best specimens of bucks.

	Buck 32 mos. old	Buck 20 mos. old
Height at shoulder,.....	31 inches	30½ inches.
Length of body from top of tail to the horns.....	32 " (?)	39 "
Breadth of horns.....	20 "	22 "
Length of head, ...	13 "	11 "
Girth of body,.....	43 "	40½ "
Breadth of hooks,....		8½ "
Length of quarters, ...		9 "
Girth of foreleg above knee,.		9 "
Girth below the knee,.....	3¾ "	3⅝ "

The average weights of the four quarters after being slaughtered were, of males 56 lbs., of ewes 52 lbs. But it must be taken into consideration that sheep in France are not fattened to the same state as with us. Consequently additional weight per quarter may be safely allowed.

The number of sheep at Rambouillet on the 31st of July last was 620, of which 118 were males and the remainder females. Previous to the last sale there were upwards of 700 sheep. Of those sold, 30 bucks were for Austria and 40 were taken off by breeders in different departments of France. The average price of the bucks was a little above $100 (£20) each. The highest price was $400. There were purchased by private sale for America 16 ewes and 1 buck. The price of the ewes was $20 (£4) each.

As wool, not flesh, constitutes the value of the Merino, they must be judged of mainly by the value of the fleece. Lambs are usually dropped in November and December, and the shearing commences in June. The first clip is therefore from sheep about eight months old. The average weight of the fleece of males at this age is 3½ lbs., and that of females at the same age of 8 months, 3 lbs. A deduction must be made from the above as the sheep are never washed. The deduction on this account may however be counterbalanced by the fact that the wool on the head, neck and legs of the young sheep is not clipped. This covering of wool is found to be essential for the health of the young sheep, to protect the head from the heat of summer, and from the cold of winter. The average weight of fleece in males 20 months old is usually 14 lbs. The average weight of fleece in females from 20 months to six years old from 8 to nine lbs., or 8½ lbs. After six years the weight of the ewe fleece falls off. The ewe produces the finest quality of wool.

The following is an outline of the method of breeding and keeping the sheep at Rambouillet. The best bucks are selected for service, but are not retained for more than two, or at most, three seasons. The ewes are generally set aside after having three crops of lambs; but those ewes which produce superior fleeces are kept one or two seasons additional. The inferior males are not used at all.

The flock at R. is kept housed from November to April; and during the rest of the year the ewes are turned out to pasture in the morning and again in the afternoon after rest and shelter at noon; while the bucks are turned out only in the afternoon. During rains all are kept to the house. Every care is taken to prevent the sheep getting wet—wetness and dampness being found to act prejudicially against the fineness of the fleece. "As the same care is taken with the Merino in Saxony, it may be held as established by experience that extreme fineness of fleece is only attainable by studying to protect the sheep from wet and damp." If this is as important as the above-quoted opinion would represent, then it is essential that those who are desirous of improving the fleece of any breed, should not only drain their lands to protect them from any under-dampness, but should provide less or more shelter for the sheep, according to the character of the breed.

The houses for the sheep are large buildings with granaries above. The ceilings of the house for the sheep are lofty, and ventilation is secured by windows placed high in the walls. These windows are protected with iron grating, and with wooden shutters for closing when necessary. The floors are bedded with straw frequently renewed.

During winter the sheep are fed three times in the day. Twice a day they are allowed a mixture of oats and barley,—two-thirds oats and one-third barley. The quantity allowed daily is one litre, or about two

pints of our measure. Bran is also allowed. The allowance of hay is about 2 lbs. daily, and of mangold wurzels double that quantity.

Every buck is numbered on his horns, and the numbers are all registered. As care is taken to prevent all intermixing at the time the bucks are following the ewes, the pedigree can at once be traced.

The lambs all drop in the months of November and December. They are allowed to follow their dams for about four months, and then fed as the older sheep. Twin lambs are not desired. When twins occur, one of the lambs is slaughtered when it is three days old. As the intention is to produce sheep of strong, vigorous constitutions, this destroying of the extra lambs is deemed advisable. The number of ewes allowed to one buck is forty to fifty.

The Merino breed is rapidly extending in France, particularly for the purpose of crossing the native breeds. When the thermometer is about 90° Fahr. the sheep at Rambouillet have usually refused to feed. The profits of the establishment at R. have been large. The average sale of bucks during a year is seventy or eighty. This number taken at an average of $100 a piece gives a large sum.

Hemlock Hedges.

Eds. Country Gentleman—Can you give directions through your paper, for the cultivation of Hemlock Hedges?

A paragraph giving particulars will greatly oblige A Would-be Farmer. *New-York, Sept.* 4, 1854.

The first thing is to procure the plants. If our correspondent can find a locality in the woods where young hemlock trees are abundant, he will have no difficulty in forming a hedge. The great requisite for success in transplanting is to remove a considerable portion of earth on the roots of every tree. If this cannot be done, they should *instantly*, on being withdrawn from the ground, and before the outside of the roots have dried in the least, be buried in wet moss,—or still better, if practicable, dipped first into a bed of thin mud, and then protected with moss. Another mudding, and puddling on setting out, will be of additional service.

If the young plants can be had from a nursery, where they have become hardened to open ground, they will be still better. We know of no nursery in the vicinity of our correspondent's residence, more likely to supply good plants than that of Dell & Collins of Waterloo, N. Y.

The mode of planting must depend on the objects of the hedge. If for a simple *screen* from the wind, and if the plants are scarce or costly, a distance of three or four feet apart will be near enough, to form in a few years, a continuous line. But if a *hedge proper* is wanted, the trees should be within about a foot of each other.

The hemlock will make the handsomest screen or hedge of any evergreen known; it will bear almost any amount of shearing, and the hedge may be formed into a smooth wall of verdure, or be left for a tall natural growth. Either way, it is of surpassing beauty. If cattle or other animals cannot *see* through, they scarcely ever attempt passing, even a weak hedge.

Rich's Cast Iron-beam Plow.

The following testimonial in favor of this plow, which is manufactured by Brown, Rich & Co., at Troy, and which is becoming very popular wherever it has been introduced, is from an extensive planter of Virginia.

Bonnie Doon, Culpepper Co., Va., Sept. 1, 1854.

Messrs. Editors—We of the Old Dominion are making strenuous efforts to renovate our lands which have been exhausted years ago, first by the continued cultivation of tobacco, and secondly by the alternation of wheat and corn without any intermediate crop to arrest the constant draught upon the soil, or meliorate its condition—third and last, though not least, by shallow plowing—the consequence of which is that no new soil is added to the few inches turned up by the plow, the rains cannot penetrate beyond the loose earth, and the greater portion of them runs off as soon as it falls, and not unfrequently carries off with it what loose earth there is. The crops are drowned out or washed away in wet weather, and burnt up in dry. We are greatly indebted to your state for agricultural implements of various kinds, but the implement of incalculable value as we conceive, is a plow lately introduced into this state and now in great demand in many portions of it. It was patented by John Rich of Troy in 1849. It is an iron-beam plow, short and curved; the shortness of the beam brings the power near the draught, enables the plowman to turn shorter and quicker around rocks and stumps and at the end of the rows,—the curve prevents choking in stubble, clover, &c. The chief advantage, however, this plow has over all others I have tried is, that with it I can plow from one-third to one-half deeper with the same force than with any other I have ever tried. The plow is the most valuable of all the agricultural implements, and your fellow-citizen John Rich, in my opinion has contributed, by this invention, more to the improvement and consequent wealth of the country than any man of any profession in it. He has received repeated honors and medals from agricultural societies and fairs, but the country should honor him in a more substantial form. W. B. Slaughter.

The Cheapest Cistern.

Messrs. Editors—I saw in one of your numbers, "the cheapest and the best cistern," which the correspondent says is, to dig a hole in the earth—then brick up, and plaster with cement. I am not mistaken in saying that I have built hundreds of cisterns which are as durable and much cheaper. My plan is to dig a hole in the earth—put on four preparations of cement, and then let the water in. The whole expense of a cistern of this kind, that will hold thirty barrels, will not exceed twelve dollars. A. Butterfield. *Colosse, Oswego Co., N. Y.*

The Vermont State Fair.

The fourth annual fair of the Vermont State Ag. Society was held at Brattleboro', Sept. 12th, 13th, and 14th. It seemed not improbable that the dry season and general cry of "hard times," might lessen the show of stock and the attendance of visitors somewhat below the expectations a good season and easier money market would excite. We were on this account the better pleased to find the Vermont Exhibition the exact reverse of all our fears,—to learn as we did. that the receipts this year were nearly *double* those of last, (say $5,600,) and that the indefatigable labors of its officers had received a happy and well merited reward. The weather was, until noon the third day, all the most sanguine friends of the society could have wished,—an air, clear and bracing, a bright sun, and roads, neither uncomfortable from mud or dust.

The Grounds were about a mile to the south of the village, and contained nearly forty acres. The surface was generally level, excepting where it declined on the southern extremity to a little stream, and the hill-side thus afforded, shaded by a fine grove, was put to the best purpose, (of which hereafter,) by the Society, as indeed was every other natural facility offered them. For instance,—the water of the stream was pumped to the top of the hill by a simple hydraulic contrivance, and thus afforded in abundance to supply the wants of the stock,—being carried in pipes to different parts of the field. On the farther side was the track for horses, entirely distinct from the remainder of the grounds,—thus obviating the continual crossing and re-crossing necessitated where a track winds among, or circles about, the other buildings. Its length was a half-mile, and it was broad enough and graded with sufficient accuracy to render it one of the very best for its length we have ever seen.

The Structures.—There were buildings to the south of the track, denominated as usual, "Mechanics" and the "Floral" Halls. The stock pens were stretched along two sides of the field, and near the halls were in several rows for the accommodation of sheep. They were all *roofed* to a greater or less extent, affording shelter, as well for the dumb animals who cannot complain of driving rains or beating sun, as for the owners of them, who have sometimes at exhibitions found ample tongues to hint the want of these necessary appendages. At the foot of the hill-side mentioned above, was placed a platform, shaded and roofed, where the address was to have been delivered, and along in rows above this, seats for the audience, after the manner of an amphitheater,—these last also in some measure shaded and roofed by the trees that here and there dotted the declivity. But the rain that came on the last day was too much for their light protection, and the address had to be delivered in Mechanic's Hall. There was also a notable structure to overlook the trotting course, upwards of 200 feet in length, and containing some 15 or 20 tiers of seats. This was securely built, and if any declined to take its fine birds-eye view of the whole grounds as well as of the course, it was because there was a small charge made to pay the expenses of its erection, and not that the firm timbers that could be seen upholding and bracing it, left room for the slightest fears as to its security. There was little want however, of the absentees. During Wednesday the staging was estimated as containing its full quota, upwards of 2,000; and the next day it also drew a large attendance.

We have spoken thus at length of the excellent arrangements at the fair, not only because they embraced facilities the most superior in almost every particular, and are thus worthy of the attention of all those engaged or connected in the supervision of such exhibitions, but also to unite with others in commending the hearty and well directed exertions of the President of the Society, Hon. Frederick Holbrook, and the executive ability and economic care displayed by the Superintendent, Mr. Lyman P. White. Other officers no doubt there were, worthy of credit for their part, but it would be unjust to omit the names of these two, on whom rested the greatest burden. And we must add that we heard not a dissenting voice from the general satisfaction. The quiet demeanor and well-bred appearance of the great body of the visitors was also noticed,—and the entire absence of intemperance and disturbances of any kind added no little to the universal enjoyment.

We must be brief in noticing the several objects exhibited. The greatest show was of course made in Sheep and Horses, although that of Working Oxen was also fine.

Horses.—The exhibition of Horses was not quite as large as that of last year, though we understood that the average excellence was perhaps greater. The *Sherman*, *Bulrush* and *Woodbury Morgans* were pretty well represented, the first by the largest numbers. The show of *Matched Horses* was not large, though including one or two noticeable pairs. There were a considerable number of *Foreign Horses* present.

We understood that a gelding, 6 years old, got by Black Hawk, was sold to leave the State for $1800, the object being of course merely his speed. If we are not mistaken in the animal, he made a mile on the track during the Exhibition between 2.40 and 2.50, and the "Flying Morgan," to whom was awarded a first prize, accomplished the distance in about the last mentioned time. Flying Morgan is said to be entirely *blind*, and is accompanied in his trotting by a boy riding a running horse abreast. He is a remarkable animal. A match between him and the "Merrick Horse," was talked of, though we believe it did not come off.

Cattle.—The Exhibition of cattle was not very large, *Durhams*, *Devons* and *Mixed* Breeds, being the principal varieties shown. The best of these were the Devons, among the exhibitors of which Mr. Sanford of Orwell, had fine animals, imported and from imported stock,—Mr. Walbridge of Bennington and Mr. Stickney of Chester, some very fine pure and mixed. The sole representatives of the *Herefords* were a cow and calf, shown by A. L. Bingham of Cornwall. Among the exhibitors of Durhams were Messrs. Sylvester Smith, Bingham, Hubbell, Carpenter and others.

Mr. Levi A. Dowley of Brattleboro, exhibited, not however for competition, a pure *Hereford* Bull, a splendid short-horned bull of the noted *Bates* stock, and several other animals, which were said to have been very fine, though we did not see them, nor hear of their being present until it was too late to do so.

The exhibition of *Working Oxen* was unusually good. At one time there were upward of 200 yoke upon the field. They were marked by a very general superiority.

Sheep.—The famed Vermont importers of French and Spanish sheep, all exhibited largely. Our friend S. W. Jewett, of Middlebury, to whom we were indebted, as well as to several others, for very polite attentions, and Mr. A. L. Bingham, were among the largest of these Messrs. Edgar Sanford of Cornwall, Saxton of Vergennes, Sherman, Wright and Dean of Cornwall. all exhibited fine animals. Mr. Geo. Campbell of Westminster West, exhibited a large and fine assortment of his imported Silesian Merinoes.

We understand that very high prices have been lately realized for imported animals of the French and Spanish Merino breeds; and we were told that upwards of

$250,000 worth of sheep had been sold the last year for breeding purposes, out of Addison Co. alone. We gathered some very interesting facts in regard to prices, fleeces lately sheared, and other accessories of sheep raising, for which we have not room here.

The Show of SWINE was very limited, but of very good quality—the animals exhibited being for breeding rather than feeding purposes. Among them were a beautiful pair of imported Essex, from S. W. Jewett of Middlebury.

The POULTRY department included a Grey Eagle,—but not a very great variety of domestic fowls. Vermont does not seem to have been attacked by the mania for chickens as largely as most other states.

There was a good variety of DOMESTIC MANUFACTURES; of IMPLEMENTS for the farm, a very slender assortment; of other mechanical contrivances a tolerable show. We noticed Halliday's Patent Wind-Mill attached to a pump, which seemed to do its duty well.

The PLOWING MATCH was well attended and gave satisfactory evidence that Vermont workmen do some of the best work with some of the best plows.

The ORATION was delivered by Hon. C. T. RUSSELL of Boston. Its subject was the *Enfranchisement of Labor*. It was an able literary effort, though not at all aiming to be practical, and was heard with evident interest. After this, the awards of the Committees on Premiums were read by the Secretary, Dr. Cummings, for which we cannot now make room.

On the whole the Fair was very successful,—which verdict was, what is somewhat unusual, nearly if not quite unanimous. The large crowds of visitors came and saw and went without accident. The officers were happy in distributing the attractions through the different days, and the programme posted every morning was no little convenience. Many older Societies might learn much from the just accomplished Anniversary of Vermont Farmers—and if any suggestions thrown out in the above account, made under some disadvantages, and necessarily brief, shall lead to such a result the officers of the Vermont Society, and not we are to receive the credit.

Cuttings of Fruit Trees.

(*A Constant Reader*, Cynthiana, Ky.) [We may as well inform our correspondent, and all others, that three weeks are required to arrange, set up, stereotype, print, and mail an edition so large as that of the Cultivator, and that consequently it is impossible to answer an inquiry from a remote State, dated "Aug. 25," in the September number.]

Cuttings should be made in autumn after growth has ceased, or early in winter—they may be preserved by fastening them in a box by slats running across, and then placing the open side of the box downwards with its contents in the bottom of a pit dug for the purpose, on a dry spot of ground, and burying the whole with earth. The slats keep the cuttings from coming in contact with the earth below, and they are preserved in a proper moist condition. Or, they may be packed in slightly damp moss, in a large box, placed in a cellar. Very *early* in spring they should be set out. Every cutting should be cut off just above a bud at the upper end, and just below one at the lower end. Taken off closely to the old wood, with the base attached, they are more sure of growth. They should be set out in a trench, in a rich mellow soil, which is to be packed or trodden closely about them as the trench is filled, and afterwards a mellow surface made by drawing on a little more earth. The length of the cutting should be eight inches to a foot, and two-thirds to nine-tenths buried. Shading the cuttings of any deciduous trees, (including all fruit trees)is of little or no advantage, but it is important to keep the ground uniformly moist; if this is done by watering, the surface should be preserved from crusting or cracking by a mulch. This is the mode of raising quince trees, currant and gooseberry bushes, grapes, &c., but will not answer for the larger fruits generally, in the northern states—it is cheaper to bud or graft, than to procure the few which may be obtained among many failures in this way.

List of State Fairs for 1854.

Ohio,	Newark,	Oct.	17—20
Illinois,	Springfield,	Oct.	3— 6
Indiana,	Madison,	Oct.	4— 6
Iowa,	Fairfield,	Oct,	25
Wisconsin,	Watertown,	Oct.	4— 7
New-York,	New-York City,	Oct.	3— 6
New-Hampshire,	Keene,	Oct.	3— 6
Georgia, So.(Central,)	Augusta,	Oct.	23—28
Connecticut,	New-Haven,	Oct.	10—13
Maryland,	Baltimore,	Oct	3— 6
Missouri,	Boonville,	Oct.	2— 6
North Carolina,	Raleigh,	Oct.	17—20
Tennessee,	Knoxville,	Oct	18—20
Virginia,	Richmond,	Nov.	1— 3

National Cattle Show,	Springfield, O.,	Oct.	25—27
Southwestern Ag. Society,	Louisville, Ky.,	Oct.	10—13
Pittsburgh Ag. Society,	Pittsburgh Pa.	Oct	3— 6
Ohio and Penn. Horse Ex.	Salem, Ohio,	Oct.	11—14
Un. Ag. Soc. of Va. and N. Carolina,	Petersburg,	Oct.	24—27
N. England Horse Exhibition,	Brattleboro, Vt.,	Oct.	17—19

Compost for Corn.

MESSRS. EDITORS—The question was asked in the 20th July No. of the Country Gentleman—"What shall we substitute for guano?" The following is submitted for your consideration, without claiming to have made any new discoveries, or intending to bring to public notice a substitute for guano, or any one of the many substances used as fetilizers of the farinaceous vegetables, but to elicit investigation and remark.

I prepared a piece of sward land last April, by turning the turf well under, some six or eight inches deep, and manuring with barn-yard and unfermented stable manure at the rate of twenty half cord loads per acre, spreading evenly as possible the manure over the surface, and harrowing with an iron tooth harrow at the rate of one day, man and team, per acre. The compost used was composed of one part gypsum, and two parts of poultry house manure, well mixed, till the whole mass formed a light greyish and oily feeling compost, comparatively free from scent.

This compost was put into the hill at planting time, about as much as could be taken up easily with the thumb and two fingers; nearly the whole piece was planted, when the quantity of compost was exhausted, and the remainder of the piece was planted without compost or manure, (except such as was spread and harrowed in common with the rest of the piece.) Now for the facts as they have developed themselves during the past dry season. When the corn first made its appearance, the one par twas dark green, while the other was yellowish; the one thick and stalky, the other small and spindling. The one part grew some two feet taller than the other—ears larger and better filled out, and some days earlier, and is estimated to be not less than one-eighth better. CALVIN ALLYN.

Information Wanted.

Corn Husker.—I have somewhere read of Hargrave's or some other corn-husker, but do not know as such an implement, of any practical utility, is to be found. With your permission, I propose to make the inquiry through your valuable papers, if a machine for husking corn, that will do its work well and save labor, can be obtained. I would like you or any of your readers or correspondents, who have tested it, to answer—first, how must the ears be prepared for husking—must they be picked from the stalk, and put in one at a time? How many bushels will a machine husk in a day, and do it well? How many hands are required to tend it, and what power to propel it, and what is the cost of the machine, and where obtained. A. C. J. *Richfield Spa, N. Y.*

There was a corn-husker on exhibition at the Crystal Palace in New-York last summer, which it was said would husk, with the aid of a man and boy, 300 bushels per day, and 1200 bushels with horse or steam power. We shall be obliged to any one who will furnish the information desired by our correspondent.

Steeping Posts.—Can you or any of your subscribers, tell whether the idea of steeping stakes or posts in a solution of blue vitriol, is an advertisement for the sale of blue vitriol, or a remedy for their rotting?—how long the remedy has been tried, with what results, and the mode of operating? and oblige. A Reader.

At the time we published the paragraph, relating to the above subject, we wrote to the gentleman who was said to have practiced the method alluded to, for further information, but received no answer, and have heard nothing of it since.

Messrs. Editors—Will you or any of your subscribers give me through the columns of your always welcome journal all the information in your or their power as to the mode of culture of the marrowfat pea as a field crop, generally adopted in your state, where, as I understand, annually many thousand acres are sown with this crop?

Is there any market for them by the quantity? And in what shape are they taken to the eastern markets? Are they put in barrels or sacks or do they go like wheat and by weight?

What particular kind would you recommend for field culture? Can they be threshed with a common machine?

Will you also be so kind as to name the variety of best yellow field corn that ripens *earliest* and where it can be obtained? A. H. Kummel. *Sharon, Wis.*

Inquiries.—Can you or any of your numerous readers, tell me how to destroy Tansey, or can it be made profitable to extract the oil. I have a piece that I would like to destroy or turn to some account. Also I will give ten dollars to any man who will send me a receipt to effectually destroy "live forever," or as it is sometimes called, *Ever-Green*. H. Stone. *Warren,*

Inquiry.—Will you, or some of my brother readers, give me a good recipe for making grape wine. H. H. M. *Farmington, Ct.*

Fungus on Cabbage Roots.—Will some of your numerous readers, inform me through the Cultivator, what will prevent fungus at the roots of Cabbage? I have raised none for several years past on account of it. A. H. Hackly. *Bridgewater, N. Y. Aug.* 16

Fall Plowing.—In the Sept. No. of the Cultivator, there is an article entitled "Fall Plowing," from which I should infer that the author did not re-plow his land in the spring, especially greensward, on which he intended to plant corn. With your permission, will the author please inform not only myself, but your numerous subscribers, as to the real intent, through your columns. J. H. F

Notes for the Month.

Singular Theorising.—The Gardener's Magazine furnishes a new plan for raising carrots, written by a certain self-styled "professor" not unknown to our readers. The plan is simply to mix radish seed with the seed of the carrot in sowing; the radishes will come up first and will break the crust; the leaves of the radishes will shade the carrots, and their long tap roots will bring up the moisture." The radishes will also "mark the rows, and prevent, very much, the growth of weeds."

Now is not this shrewd! "*The leaves of the radishes will shade the carrots*"—will not the leaves of pig weeds do this quite as well, and save the price of the radish seed?—"*Their long tap-roots will bring up moisture,*"—but will they let the carrots have any when it is brought up? What smart farmer's-boy does not know that the leaves of the radishes would throw off the moisture drawn up through the roots, faster than the sun could evaporate it from a bare surface? "*The radishes will prevent the growth of weeds,*"—by performing towards the carrots all that weeds themselves would do, namely, choking them down by their broad leaves, and exhausting the soil of its moisture and fertility. Would it not be cheaper to "prevent the growth of weeds" by sowing pigweed and fox-tail in the rows? No wonder that some readers acquire a dislike to "science" and book-farming, when such stuff as this is promulgated by pretenders.

"Credit."—We alluded recently to the frequency with which articles were copied from this paper without credit. In clearing off the pile of exchange papers which had accumulated on our table during the past week, we had the curiosity to ascertain how many articles they contained which had been copied from this paper. We found the whole number to be 123, of which 77 were properly credited, and 46 without credit, with the exception of a few instances in which "Ex." was attached to them.

More Cattle.—The ship Highflyer from Liverpool, which arrived at New-York last week, "had a large number of valuable cattle for Mr. Thorne, of Dutchess County, and Mr. McHenry, of Baltimore. In the lot there was one prize Devon bull and heifer, and one prize Alderney bull and heifer. The prizes for these cattle were given at the recent meeting of the Royal Agricultural Society of England."

Transplanting Hickories.—The hickory is reputed to be incapable of being removed successfully, and the difficulty appears to be chiefly on account of its deep roots. The Prairie Farmer reports a number of cases where young trees, three to seven feet high have been successfully transplanted from the woods or openings, to the grounds of Augustus Adams, of Elgin, Ill., with the same certainty as any other trees. His mode is to dig down till he gets tired of it, and then cut off

the tap root. "He never stops," says the Farmer, "till he gets four feet and from that to six, and yet he states that he never got so low as to find the tap as small as the tree at the surface of the ground."

PITTSBURGH TILE WORKS.—We have received from JAS. WARDROP & Co., the proprietors of the Pittsburgh Tile Works, an interesting pamphlet, setting forth the advantages of thorough drainage, with directions for laying the tile, &c. We always rejoice to see these establishments increase in number, confident as we are that every facility afforded the cultivator to procure tile, is a public benefit. Drain ng may perhaps be considered one of the modern improvements about the utility of which there is no question. We have never known an instance where money was judiciously expended for this purpose, which did not afford satisfactory returns.

☞ The *Indiana Farmer* claims our neighbor, Mr. D. D. T. MORE of Watervliet, as "the leading editor of the Rural New-Yorker." Beside him of the New-Yorker, and our neighbor, we have another good farmer of the same name in the north part of this state, from which we infer that "the Farmer's Boy," as the late Gov. D. D. Tompkins was called, was a great favorite with the Moore Family.

☞ It is stated that the appropriation bill, passed at the late session of Congress, contains an appropriation of $25.000, for the collection of agricultural Statistics and the procurement and distribution of cuttings and seeds.

ENDOWMENT.—Dr. WM. TERRILL of Hancock county, Ga., has given $20.000 to the University of Georgia, to endow a professorship of Agriculture; and the Trustees, in accordance with the recommendation of the donor, have appointed Dr. D. LEE, editor of the *Genesee Farmer*, Rochester, to fill the "Terrill Professorship of Agriculture."

FINE FRUIT.—We are greatly indebted to Prof. HALL of this city, for a basket of Peaches and Nectarines. The Crawford's Early and George IVth peaches were the handsomest specimens we have seen this season—also to Mr. E. R. BALL of North Nassau, for samples of the Summer Bon Chretien Pear, which ex hibited in a marked degree, the effect of cultivation. One of the samples was from a tree near the house, which was well cared for, and which occasionally received a dressing of soap-suds. These were more than twice as heavy as some taken from a tree growing in grass land.

HORT. EXHIBITION.—It was deemed advisable by the board of managers, on account of the effects of the long-continued drouth in this vicinity, to post-pone the annual exhibition of the Albany and Rensselaer Hort. Society, which was to have been held in this city last week. Three of the most extensive exhibitors usually, however, did not get notice of the postponement, and appeared promptly at the rooms with their contributions. Mr. NEWCOMB of Pittstown, had 138 varieties of flowers, (among them several new and very pretty,) several bouquets, 17 varieties of Tomatoes, and half a peck of very handsome seedling Potatoes. Mrs. VAN NAMEE of the same place, had some beautiful bouquets, a very handsome show of flowers, and fine samples of fruit. Among the lot presented by Mr. DINGWALL of this city, 5 large bouquets, 84 varieties of Verbenas, 24 seedling Phloxes, Dahlias, cut flowers, pears, melons, &c., and an egg from Egg plant, weighing 8 lbs. 14 ounces.

☞ We understand that Judge SHELDON of Cayuga Co., has recently sold his Short Horn Bull, Kirkleavington 1st, to Mr. LATHROP of Mass., for $800. It was purchased by Judge S. of GEO. VAIL, Esq. Troy, by whom it was bred from the Duke of Wellington, whose portrait we gave week before last.

COTTAGES FOR FARM-LABORERS.—We have already strongly recommended these for general introduction, for the purpose of relieving farmers' wives from a most laborious, and sometimes almost insupportable burthen, —the boarding of numerous hands. We are glad to perceive by a late number of the *Rural New-Yorker*, that J. P. ROOT, of Sweden, Monroe Co., N. Y., the enterprising president of the agricultural society in that county, who cultivates a farm of 100 acres, has a large number of this character, and keeps only one farm-laborer in his own dwelling. That he has not lost much by this mode of management, is evident from the facts,—that he began farming with $1500 worth of property,—that this is his only business,—that he now has 700 acres of excellent land all paid for,—that his nett profits last year, besides family expenses, were $5.935, or $16.40 per acre on the cleared land,—and that he is not yet forty years old

WEEDS.—If every farmer will look over his grounds he will find that the list of really troublesome weeds is quite small, although there are thousands of species of different plants, which might all become weeds. Why are they not all so? Simply because they have *no seed in the soil*. In some parts of the world, our weeds are entirely unknown. Why? They have not *the seed*. Now if other countries have not our weeds, should *we* have them, if we were only to rid ourselves of the seed? If only a fortieth part of our plants have been suffered to get in and drop their seed, and become troublesome weeds, why should we keep out thirty-nine fortieths, and let the other fraction overrun us? In China and in some parts of Flanders, the fields are entirely free from weeds—the result of long-continued, cleanly cultivation. If the French are not troubled with our red-root, why should not we try for the same exemption? If the English are unacquainted with our chess, why can we not enjoy the same privilege? If a single county in Pennsylvania has never raised a plant of the Canada thistle, why may not all the counties in the Union become equally free? They may—if they will only remember the aphorism, that "the price of this freedom is eternal vigilance."

PRESERVING GRAPES.

The most common way is to pack them in layers with cotton. Sawdust, sand, and even dry maple leaves have been successfully used, and the latter is said to have answered an excellent purpose, being superior to cotton for its superior cleanliness and freedom from the little white fibres which so often adhere to the berries and prove so troublesome when cotton is employed.

We have never found any thing to succeed so well as filling in the interstices with *baked maple sawdust*—using jars which may be covered air-tight.

The last number of the Prairie Farmer furnishes the results of a number of experiments, performed by Jeremiah Price of Chicago, who has tried all the modes he could hear of or invent, including packing in cotton, leaves, sawdust, wet sand, dry sand, and in cans with the air exhausted, and he finds nothing equal to dry oak sawdust or dry sand, the former being best. He has kept them till the following summer. We never succeeded in keeping them so long—solely for the reason, undoubtedly, that they were not under lock and key.

☞ When gentlemen address us on *their own* business, they should not fail to pay the postage—especially if they expect to have their requests attended to.

Asiatic Fowls for Sale.

50 PAIR Brahma Pootra; per pair.....$3 to $5
50 do. Buff and Red Shanghai; " .....$2 " $4

All perfectly healthy and warranted pure bred. References—Dr. John H. Cole and S V. C. Van Rensselaer.

E. G. STUDLEY.
Sept. 7—w1tm1t. Claverack, Col. Co., N. Y.

GENEVA NURSERIES.

THESE Nurseries are located on the New-York Central Rail Road, 50 miles from Rochester, and the same distance from Syracuse, having every facility for shipping East, West, North or South. The attention of those that wish to purchase, is invited to the following stock of Fruit and Ornamental Trees:

200.000 Apple, 2 to 4 years—50,000 Cherry, 1 and 2 years—5,000 Standard Pears—20,000 Dwarf do.—5,000 Peach, 1 and 2 years—10,000 Mountain Ash, large size—2,000 Horse Chestnut, 5 to 9 ft.—5,000 Balsam Fir, 3 to 6 ft.—500,000 Apple Seedlings, 2 years—200,000 do 1 year—20,000 European Mountain Ash, 1 year—50,000 Arbor Vitæ—50,000 Basket-Willow Cuttings—50,000 Osage Orange, 1 and 2 years—50,000 Asparagus Roots—together with a general assortment of other stock.

W. T. & E. SMITH.
Sept. 21—w1tm1t* Geneva, N Y.

Fruit and Ornamental Trees,

At the New Canaan Nursery, situated in New Canaan (Ct.) 3 1-2 miles from Norwalk R. R. Depot.

THE subscribers offer for sale, the coming Autumn and Spring, one of the largest stocks of FRUIT TREES in New England, carefully grown and propagated by ourselves.

Our stock consists in part of 40,000 Appple Trees, of suitable age and size for transplanting, of the most popular varieties.

15,000 Peach Trees, one and two years from the bud, of a healthy origin.

Also a stock of Pear, Plum, Cherry, Apricot and Quince Trees.

Red Antwerp, Franconia and Fastolff Raspberries.

ORNAMENTAL TREES, Norway Spruce, Balsam Fir, Arborvitæ, Scotch Pine, Horse Chestnut, Mountain Ash, Larch, and various others.

50,000 Appple Seedlings, 2 years old.

Persons wishing to purchase in large or small quantities, will find it to their interest to communicate with us.

STEPHEN HOYT & Co.
New Canaan, Ct.
Sept. 1, 1854—w1tm2t.

Choice Poultry for Sale

BRAHMA Pootra or Chittagongs—Royal Cochin Chinas—White, Black, Buff and Brown Shanghaes—Black Spanish and Gold and Silver Polands, all warranted pure blood, and of the best importations in the country, or from specimens which took the first and second premiums at many of the recent exhibitions.

Fowls to be sent a distance, will be carefully cooped in good health and good condition. All orders post-paid.

Reference, C. W. Godard, Esq., B. B. Kirtland, Esq., Albany.

GEORGE ANDERSON,
56 Schuyler st. Albany, N. Y.
Sept. 1—w&m3m.

ONE DOLLAR AND TWENTY FIVE CENTS.

ELLIOTT'S FRUIT BOOK,

OR, THE AMERICAN FRUIT GROWER'S GUIDE IN THE ORCHARD AND GARDEN.

SENT FREE OF POSTAGE.

"A large number of Western apples and other fruits are described in this book, which are not found in other works of the kind: and the remarks on the selection of varieties for Western culture, propagation, management, &c., as far as we have had time to examine seem to us judicious and valuable. Every nurseryman and fruit grower, especially in Ohio and the western States should procure a copy."—Ohio Cultivator.

But the chief value of the book lies in its practical details—in its classifications and specifications of the different varieties, with the peculiarities they present, and the different methods of training they require. This branch of the subject, which is very full, is copiously illustrated by drawings."—Phil. North American.

"It is a book that every farmer and fruit grower may profitably read"—Rochester Daily American.

"As Mr. Elliott resides in Cleveland he is much better acquainted with what fruits are adapted to the Central States than horticulturists or pomologists who reside on or near the Atlantic seaboard. This fact gives the work great additional value to those who are engaged in cultivating fruit in the Mississippi valley."—Democratic Press, Chicago.

"Elliot's Fruit Book," is the most direct and practical of any treatise that has fallen under our observation; clear and minute in its directions, both as to modes of culture and qualities of the different kinds and varieties of fruit. We recommend its purchase as an investment that will speedily return many hundred fold."—Binghamton Democrat.

It contains much matter of practical value to fruit growers in the new states.—Rural N Yorker.

"The great mass of the matter is marked with correctness and with much knowledge of fruits, and the work will of course stand at the head, so far as its descriptions of Western varieties are concerned; and as such we strongly commend it to the fruit raising portion of the community."—Country Gentleman.

"This work, from the examination we have been able to make will probably be found one of the best works on Pomology yet published. The author has had the aid of many of the best fruit growers of this country, and gives drawings of numerous varieties of each class of fruit."—Am. Farmer.

"Mr. Elliott has long been known as a practical horticulturist, and as an able writer on pomology."—Boston Cultivator.

"It embodies all the latest important information pertaining to fruit culture, and we can recommend it as a thorough and reliable work—got up for its intrinsic worth, not for speculation."—Northern Farmer.

"Such a book cannot fail to secure a ready and extensive sale in every part of the country."—Godey's Lady's Book.

"Mr. Elliott is definite in his descriptions, and a man of experience in the culture of fruits in the orchard and garden, and favorably known."—Maine Farmer.

"Mr. Elliott has rendered an acceptable service to the cause of horticulture."—Practical Farmer.

"From what we have seen and read, we cannot hesitate in recommending it as in many respects the most complete and valuable book of the kind in existence. The descriptions of fruit are full, clear, and methodical; and the illustrations of the best order—not mere outlines—but full, or half sectional figures, with cores, seeds, &c., as true to nature as we have ever seen. The book cannot fail of being useful in a high degree."—Prairie Farmer.

"The author of this work now before us has given us a very valuable work on the cultivation of fruits. He was amply qualified to do so, having been for ten years engaged in "the nurturing of trees and noting their products."—Michigan Farmer.

C. M. SAXTON Publisher.
Sept. 27, 1854—w1tm1t. 152 Fulton street, New-York.

THE HORSE, THE HORSE,

Noblest of Domestic Animals,

AND the one most frequently ill-treated, neglected and abused. We have just published a book so valuable to every man who owns a Horse, that no one should willingly be without it. It is entitled,

THE MODERN HORSE DOCTOR,

And is from the pen of a celebrated English Veterinary Surgeon, Dr. GEO. H. DADD, well known for many years in this Country, as one of the most successful, scientific and popular writers and lecturers in this branch of medical and surgical science. The book which he now offers to the public, is the result of many year's study and practiceal experience which few have had.

From the numerous and strong commendations, of distinguished men and the newspaper press, we select the following:

Extracts from a letter from Hon. John H. Clifford, Ex-Governor of Mass.

NEW BEDFORD, May 11, 1854.

DR DADD,—Dear Sir:—I hope your new work on the noblest creature that man has ever been permitted to hold in subjection, (the Horse) will meet with that success which all your efforts in this direction so well deserve.

Your obedient servant,
JOHN H. CLIFFORD.

From Hon. Marshall P. Wilder.

BOSTON, May 13, 1854.

Dr. DADD,—My Dear Sir:—I am greatly obliged to you for the valuable treatise, the results of your own investigations, which you have recently issued. Hoping that it may meet with the patronage of a discriminating community,

I remain yours with great regard,
MARSHALL P. WILDER.

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We deem this decidedly the best and most reliable work on the 'Cause, Nature and Treatment of Disease and Lameness in Horses," ever published.—*Nantucket Inquirer.*

What we have read of this book induces us to regard it as a very sensible and valuable work; and we learn that those much more competent to judge of its value, have given it their unqualified approval.—*Evening Traveler, Boston*

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Aug. 10, 1854—w9tm2t.

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A. S. BABCOCK.
Albany, April 20, 1854—w&m6m

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A NEW FERTILIZER.

THE LODI MANUFACTURING COMPANY, (who have been manufacturing Poudrette for 14 years,) have, by a recently discovered process, been enabled so completely to disinfect Night Soil, as to present to the Agricultural World that long sought after and greatly to be desired article.

PURE NIGHT SOIL, DISINFECTED AND DRIED.

This article differs from Poudrette, and every other article of manure made from human excrement, from the fact that it contains no mixture of foreign substance whatever, (except 5 per cent. of calcined gypsum, which is used to retain any fugitive ammonia.) the sulphuretted hydrogen which is the offensive gas escaping from Night Soil, is taken from it by a peculiar process. It is, also, entirely separated from rubbish not smaller than a pin's head, and so concentrated, that its bulk is decreased one half by manufacture, yet, at the same time, none of its virtues are allowed to escape. The Lodi Manufacturing Company have selected the Chinese words dessiceted night soil, as the name for this article, viz:—

Ta-Feu,

and offer it for sale under the following guarantees:—

1st—That it is free from unpleasant odor, and contains 95 per cent. of night soil concentrated, and 5 per cent. of calcined gypsum, and nothing else.

2nd—That it cannot be surpassed by any other manure in the world, either in fertilizing power or in cheapness

3d.—That it is equal to Guano in the proportion of 4 pounds of Ta-feu to 3 pounds of Guano. That it is equal to any superphosphate of lime now in market *pound* for *pound* on any crop, and is one-third cheaper than Guano, and twice as cheap as superphosphate.

4th.—It contains every kind of food necessary to the growth of plants, and is perfectly soluble in water, making, therefore, a splendid *top dresser* on grass and grain.

It is perfectly dry, and can be bagged or barrelled, and sent to any part of the United States. Price $20 per ton, of 2,240 lbs., for any quantity over 10 tons; under that, $25. No charge will be made for cartage or package.

Persons wishing to try it, can send us any amount, from $3 upwards, and the exact number of pounds will be forwarded, with directions for use.

We recommend it strongly on cabbage plants, turnips, wheat, grain and grass, either sowed or harrowed in, or as a top dressing, after the grain is up. On cabbages and turnips it has already been tried with astonishing results, having doubled the size of cabbage plants in a week.

For 300 to 500 lbs. per acre will be a first rate dressing for grass in the fall and for grain followed by grass; a tablespoonful is more than sufficient for a cabbage plant.

All communications must be addressed to the

LODI MANUFACTURING COMPANY,
74 Cortlandt St. New-York.

August, 17—w4tm2t.

GUANO NOTICE.

AS there is a substance now selling by some dealers in this city and Brooklyn, for the No. 1 Peruvian Guano, we caution the agricultural public who may purchase Peruvian Guano this season, to observe that every bag of the genuine article will have the following brand:

NO. 1,
PERUVIAN GUANO,
IMPORTED BY
F. BARREDA BROTHERS.

The price is now established for this season, at $50 per ton of 2,000 lbs. When taken in lots of five tons and upwards, a discount will be made. LONGETT & GRIFFING,
State Agricultural Warehouse, No. 25, Cliff-Street
Aug. 17—w6tm2t New-York.

Super-Phosphate of Lime.

THIS celebrated fertilizer, where it has been fairly tested the last year, has been found equal, and in many cases superior to the best Peruvian guano, in its immediate effect, and much more permanently beneficial to the land. It is adapted to any soil in which there is a deficiency of *phosphate*, which is often the case. All crops are benefited by its application It is composed of ground bones, decomposed by sulphuric acid, to which is added a due proportion of Peruvian guano, sulphate of ammonia, &c.

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Feb. 16, 1854—w&mtf

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Messrs. THOS. BETTS & BROTHERS, of Herts, Eng.

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JAMES M. MILLER, Agent, New-York City. THOS. BETTS & BROS. Herts, England.
July 1—w&m3m

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"Emery's Patent Changeable Railroad Horse Powers."
Overshot Threshing Machines with Separators.
Mowing and Reaping Machines.
Grist-mills, Corn-shellers and Clover-hullers.
Circular and Cross-cut Saw-mills, adapted to the horse power, for cutting fire wood and fence stuff, with a full and complete assortment of FIELD AND GARDEN SEEDS and FERTILIZERS. For further particulars, full Catalogue will be sent on application by mail.

RICH'D H. PEASE,
March 30—w&mtf Successor to Emery & Co

Fertilizers.

BEST Peruvian Guano—
Super-Phosphate of Lime, "DeBurg's No. 1"—
Poudrette, of the best quality—
Ground Plaster, suitable for agricultural purposes—
Ground Bone, Bone Dust, and Burnt Bone.

Also, Grass Seeds of reliable quality, at the lowest market price. GEO. DAVENPORT, 5 Commercial,
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S. S. MILLER,
July 1, 1854—mtf Spring-Vale, Fairfax Co., Va.

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FRUIT TREES,

ORNAMENTAL TREES, SHRUBS, FLOWERING PLANTS, &c.

AN extensive and select collection of Fruit Trees, propagated from *bearing trees of the finest sorts*, is offered for sale at the nursery of J. J. THOMAS, at the following prices:

Apple trees,...	20 cents each—	$16	pr. 100
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Cherry " with fine heads,...	37½	"	"	25	"
Pear " standards,...	50	"	"		
" " dwarfs,...	37½	"	"	25	"
Plum " (large and thrifty.)	50				

Besides the smaller fruits, as Strawberries, Grapes, &c.

☞ Careful selections will be made by the proprietor, when desired, embracing a suitable proportion of the best varieties, so as to afford a regular succession of the finest fruit through summer, autumn, and winter, without additional charge.

Also, for sale, a large collection of ORNAMENTAL TREES and SHRUBS, HERBACEOUS PERENNIAL FLOWERING PLANTS, &c., among which are the most brilliant varieties of Roses, the finest Spiræas, Pœonias, Phloxes, &c.

Orders directed "J. J. THOMAS, Macedon, Wayne Co., N. Y.," accompanied with remittances, will be faithfully and promptly attended to, and the trees and plants packed in the best manner for safe conveyance by railway.

9th mo., 1851—w6tm2t

HIGHLAND NURSERIES

NEWBURGH, N. Y.

SAUL & CO have the pleasure to announce to their *patrons* and the *public in general*, that their stock of

FRUIT AND ORNAMENTAL TREES, SHRUBS, &c.

Which they offer for sale the coming autumn, is of the *very best* quality, and embraces every thing in their line that can be procured in the trade.

Dealers and Planters of Trees *on a large scale*, will be treated with on as liberal terms as can be done by any establishment of reputation in the country. They flatter themselves, that for correctness of nomenclature of fruits, (which is a serious consideration to Planters that their stock is as nearly perfect as can be; having all been propagated on their own grounds, *from undoubted sources*, under the personal supervision of Mr. SAUL.

They have propagated in large quantities, *all the leading and standard varieties, which are proved* to be best adapted for general cultivation, especially those recommended by the AMERICAN POMOLOGICAL CONGRESS, at its several sessions, as well as all *novelties*, and certain kinds particularly suited to certain sections and localities of the Union, and the Canadas.

Their stock of PEAR TREES is the largest they have ever had to offer for sale, and among the largest in the country, and consists of over 50,000 saleable trees.

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Also, PEARS ON QUINCE, CHERRY ON MAHALEB, and APPLE ON PARADISE STOCKS, for Pyramids and Dwarfs, for garden culture; and of which there is a choice assortment of the kinds that succeed best on those stocks.

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